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**\\ZZ_DWI_QIBA\DWI_QIBA\QA_MSC\QA_200622\localizer**

TA: 31 sec Coil Selection: Auto Voxel Size: 1.2×1.2×10.0 mm³ Acc:: None Rel. SNR: 1.00

---

## Properties

| | |
|---|---|
| Start measurement without further preparation | Off |
| Wait for User to Start | Off |
| Start measurements | Single Measurement |
| Prio Recon | Off |
| Auto Open Inline Display | Off |
| Auto Close Inline Display | Off |
| Load Images to MR View&GO | On |
| Auto Store Images | On |
| Load Images to Stamp Segments | On |
| Load Images to Graphic Segments | On |
| Graphic segment | Default |
| Inline Movie | Off |

## Routine

| | |
|---|---|
| Slice Group | 1 |
|   Slices | 1 |
|   Distance Factor | 20 % |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
|   Slices | 1 |
|   Distance Factor | 20 % |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
|   Slices | 1 |
|   Distance Factor | 20 % |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |
| Phase Oversampling | 0 % |
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| TR | 13.0 ms |
| TE | 7.30 ms |
| Averages | 1 |
| Concatenations | 18 |
| AutoAlign | --- |

## Contrast - Common

| | |
|---|---|
| TR | 13.0 ms |
| TE | 7.30 ms |
| TD | 0.00 ms |
| MTC | Off |
| Magn. Preparation | None |
| Flip Angle | 40 deg |
| Fat-Water Contrast | Standard |
| Dark Blood | Off |
| Contrasts | 1 |
| Reconstruction | Magnitude |

## Contrast - Dynamic

| | |
|---|---|
| Dynamic Mode | Standard |
| Measurements | 1 |
| Multiple Series | Each Measurement |

## Resolution - Common

| | |
|---|---|
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| Base Resolution | 256 |
| Phase Resolution | 50 % |
| Interpolation | Off |

## Resolution - Acceleration

| | |
|---|---|
| Acceleration mode | None |
| Phase Partial Fourier | Off |
| Asymmetric Echo | Off |

## Resolution - Filter

| | |
|---|---|
| Raw Filter | Off |
| Elliptical Filter | Off |
| Distortion Correction | 2D |
| Normalize | Off |
| Image Filter | Off |

## Geometry - Common

| | |
|---|---|
| Slice Group | 1 |
|   Slices | 1 |
|   Distance Factor | 20 % |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
|   Slices | 1 |
|   Distance Factor | 20 % |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
|   Slices | 1 |
|   Distance Factor | 20 % |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |
| Phase Oversampling | 0 % |
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| TR | 13.0 ms |
| Multi-Slice Mode | Sequential |
| Series | Interleaved |
| Concatenations | 18 |

## Geometry - AutoAlign

| | |
|---|---|
| Slice Group | 1 |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
|   Position | Isocenter |
|   Orientation | Sagittal |
|   Phase Encoding Dir. | A >> P |

## Geometry - AutoAlign

| AutoAlign | --- |
|---|---|
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Orientation | Sagittal |
| Initial Rotation | 0.00 deg |

## Geometry - Saturation

| Saturation Mode | Standard |
|---|---|
| Special Saturation | None |

## Geometry - Tim Planning Suite

| Set-n-Go Protocol | Off |
|---|---|
| Table Position | 0 mm |
| Table Position | H |
| Inline Composing | Off |

## System - Miscellaneous

| Coil Selection | Auto Coil Select |
|---|---|
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combination | Adaptive Combine |
| Matrix Optimization | Off |
| Coil Focus | Flat |

## System - Adjustments

| Adjustment Strategy | Standard |
|---|---|
| B0 Shim | Tune up |
| CoilShim | Off |
| Adjustment Tolerance | Auto |
| Adjust with Body Coil | Off |
| Confirm Frequency | Never |
| Assume Silicone | Off |

## 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 | 63.680140 MHz |
|---|---|
| ? Ref. Amplitude 1H | 0.000 V |
| Reset | Off |
| Image Scaling | 1.000 |

## Physio - Signal

| 1st Signal/Mode | None |
|---|---|
| TR | 13.0 ms |
| Segments | 1 |
| Concatenations | 18 |

## Physio - Cardiac

| Tagging | None |
|---|---|
| Fat-Water Contrast | Standard |
| Magn. Preparation | None |
| Dark Blood | Off |

## Physio - Cardiac

| FoV Read | 300 mm |
|---|---|
| FoV Phase | 100.0 % |
| Phase Resolution | 50 % |
| Dynamic Mode | Standard |

## Physio - PACE

| Resp. Control | Off |
|---|---|
| Concatenations | 18 |

## Inline - Liver

| Liver Registration | Off |
|---|---|
| Save Original Images | On |

## Inline - Subtraction

| Subtract | Off |
|---|---|
| Measurements | 1 |
| StdDev | Off |
| Save Original Images | On |

## Inline - Cardiac

| Magn. Preparation | None |
|---|---|
| Save Original Images | On |
| Contrasts | 1 |
| TE | 7.30 ms |
| TR | 13.0 ms |

## Inline - MIP

| MIP Sag | Off |
|---|---|
| MIP Cor | Off |
| MIP Tra | Off |
| MIP Time | Off |
| Radial MIP | Off |
| Save Original Images | On |
| MPR Sag | Off |
| MPR Cor | Off |
| MPR Tra | Off |

## Inline - Soft Tissue

| Wash-in | Off |
|---|---|
| Wash-out | Off |
| TTP | Off |
| PEI | Off |
| MIP Time | Off |
| Measurements | 1 |

## Inline - Composing

| Inline Composing | Off |
|---|---|

## Sequence - Part 1

| Sequence Name | fl_rr |
|---|---|
| Dimension | 2D |
| Excitation | Slice-sel. |
| RF Pulse Type | Normal |
| Gradient Mode | Whisper |
| Flow Compensation | Read |
| Bandwidth | 210 Hz/Px |
| Asymmetric Echo | Off |
| Segments | 1 |

## Sequence - Part 2

| Introduction | On |
|---|---|
| RF Spoiling | On |
| Acoustic noise reduction | Off |

**Sequence - Assistant**

| SAR Assistant | Off |
| --- | --- |

**\\ZZ_DWI_QIBA\DWI_QIBA\QA_MSC\QA_200622\QIBA_qa_vibe_cor_iso**

TA: 2:43 min Coil Selection: Auto Voxel Size: 1.0×1.0×1.0 mm³ Acc:: 2 Rel. SNR: 1.00

## Properties

| | |
|---|---|
| Start measurement without further preparation | On |
| Wait for User to Start | Off |
| Start measurements | Single Measurement |
| Prio Recon | Off |
| Auto Open Inline Display | Off |
| Auto Close Inline Display | Off |
| Load Images to MR View&GO | On |
| Auto Store Images | On |
| Load Images to Stamp Segments | On |
| Load Images to Graphic Segments | Off |
| Graphic segment | Default |
| Inline Movie | Off |

## Routine

| | |
|---|---|
| Slab Group | 1 |
| Slabs | 1 |
| Distance Factor | 20 % |
| Position | R1.4 P18.6 H0.7 mm |
| Orientation | C > T-1.4 |
| Phase Encoding Dir. | F >> H |
| Slices per Slab | 192 |
| Phase Oversampling | 0 % |
| Slice Oversampling | 0.0 % |
| FoV Read | 250 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 1.0 mm |
| TR | 6.0 ms |
| TE | 2.38 ms |
| Averages | 1 |
| Concatenations | 1 |
| AutoAlign | Head > Orbits |

## Contrast - Common

| | |
|---|---|
| TR | 6.0 ms |
| TE | 2.38 ms |
| Flip Angle | 10 deg |
| Fat-Water Contrast | Standard |
| Contrasts | 1 |
| Reconstruction | Magnitude |

## Contrast - Dynamic

| | |
|---|---|
| Dynamic Mode | Standard |
| Temporal Interpolation | 1 |
| Measurements | 1 |
| Multiple Series | Off |
| 3D Reordering | Standard |
| Time to Center | 82.6 s |
| Burn Time to Center | Off |

## Resolution - Common

| | |
|---|---|
| FoV Read | 250 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 1.0 mm |
| Base Resolution | 256 |
| Phase Resolution | 100 % |
| Slice Resolution | 100 % |
| Trajectory | Cartesian |
| Interpolation | Off |

## Resolution - Acceleration

| | |
|---|---|
| Acceleration mode | GRAPPA |
| Total Factor | 2 |
| Reference Scans | Integrated |
| Acceleration Factor PE | 2 |
| Reference Lines PE | 24 |
| Acceleration Factor 3D | 1 |
| Phase Partial Fourier | Off |
| Slice Partial Fourier | Off |
| Asymmetric Echo | Weak |
| Elliptical Scanning | Off |

## Resolution - Filter

| | |
|---|---|
| Raw Filter | Off |
| Elliptical Filter | On |
| POCS | Off |
| Distortion Correction | 2D |
| Normalize | Prescan |
| Noise Masking | Off |
| Image Filter | Off |

## Geometry - Common

| | |
|---|---|
| Slab Group | 1 |
| Slabs | 1 |
| Distance Factor | 20 % |
| Position | R1.4 P18.6 H0.7 mm |
| Orientation | C > T-1.4 |
| Phase Encoding Dir. | F >> H |
| Slices per Slab | 192 |
| Phase Oversampling | 0 % |
| Slice Oversampling | 0.0 % |
| FoV Read | 250 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 1.0 mm |
| TR | 6.0 ms |
| Series | Ascending |
| Concatenations | 1 |

## Geometry - AutoAlign

| | |
|---|---|
| Slab Group | 1 |
| Position | R1.4 P18.6 H0.7 mm |
| Orientation | C > T-1.4 |
| Phase Encoding Dir. | F >> H |
| AutoAlign | Head > Orbits |
| Initial Position | R1.4 P18.6 H0.7 |
| R | 1.4 mm |
| P | 18.6 mm |
| H | 0.7 mm |
| Initial Orientation | C > T |
| C > T | -1.40 |
| > S | 0.00 |
| Initial Rotation | 90.00 deg |

## Geometry - Saturation

| | |
|---|---|
| Special Saturation | None |

## Geometry - Tim Planning Suite

| | |
|---|---|
| Set-n-Go Protocol | Off |
| Table Position | 0 mm |
| Table Position | H |
| Inline Composing | Off |

## System - Miscellaneous

| Coil Selection | Auto Coil Select |
|---|---|
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combination | Adaptive Combine |
| Matrix Optimization | Off |
| Coil Focus | Flat |

## System - Adjustments

| Adjustment Strategy | Standard |
|---|---|
| B0 Shim | Standard |
| CoilShim | Off |
| Adjustment Tolerance | Auto |
| Adjust with Body Coil | Off |
| Confirm Frequency | Never |
| Assume Silicone | Off |

## System - Adjust Volume

| Position | R1.4 P18.6 H0.7 mm |
|---|---|
| Orientation | C > T-1.4 |
| Rotation | 90.00 deg |
| F >> H | 250 mm |
| R >> L | 250 mm |
| A >> P | 192 mm |
| Reset | Off |

## System - Tx/Rx

| Frequency 1H | 63.680140 MHz |
|---|---|
| ? Ref. Amplitude 1H | 0.000 V |
| Reset | Off |
| Image Scaling | 1.000 |

## Physio - PACE

| Resp. Control | Off |
|---|---|
| Concatenations | 1 |

## Inline - Liver

| Liver Registration | Off |
|---|---|
| Save Original Images | On |

## Inline - Subtraction

| Subtract | Off |
|---|---|
| Measurements | 1 |
| StdDev | Off |
| Save Original Images | On |

## Inline - Cardiac

| Save Original Images | On |
|---|---|
| Contrasts | 1 |
| TE | 2.38 ms |
| TR | 6.0 ms |

## Inline - MIP

| MIP Sag | Off |
|---|---|
| MIP Cor | Off |
| MIP Tra | Off |
| MIP Time | Off |
| Radial MIP | Off |
| Save Original Images | On |
| MPR Sag | Off |
| MPR Cor | Off |
| MPR Tra | Off |

## Inline - Soft Tissue

| Wash-in | Off |
|---|---|
| Wash-out | Off |
| TTP | Off |
| PEI | Off |
| MIP Time | Off |
| Measurements | 1 |

## Inline - Composing

| Inline Composing | Off |
|---|---|

## Sequence - Part 1

| Sequence Name | fl |
|---|---|
| Dimension | 3D |
| Excitation | Slab-sel. |
| RF Pulse Type | Normal |
| Gradient Mode | Normal |
| Bandwidth | 810 Hz/Px |
| Asymmetric Echo | Weak |
| Optimization | None |

## Sequence - Part 2

| Introduction | On |
|---|---|
| RF Spoiling | On |
| Incr. Gradient Spoiling | On |
| Breast Application | Off |

## Sequence - Assistant

| SAR Assistant | Off |
|---|---|
| Optimization | None |

| \\ZZ_DWI_QIBA\DWI_QIBA\QA_MSC\QA_200622\QIBA_diff_qa_cor |
|---|
| TA: 3:54 min Coil Selection: Auto Voxel Size: 1.7×1.7×4.0 mm³ Acc:: 2 Rel. SNR: 1.00 |

## Properties

| | |
|---|---|
| Start measurement without further preparation | Off |
| Wait for User to Start | Off |
| Start measurements | Single Measurement |
| Prio Recon | Off |
| Auto Open Inline Display | Off |
| Auto Close Inline Display | Off |
| Load Images to MR View&GO | On |
| Auto Store Images | On |
| Load Images to Stamp Segments | Off |
| Load Images to Graphic Segments | Off |
| Graphic segment | Default |
| Inline Movie | Off |

## Routine

| Slice Group | 1 |
|---|---|
| Slices | 35 |
| Distance Factor | 25 % |
| Position | L0.0 P18.6 H0.6 mm |
| Orientation | C > T-0.7 > S-0.6 |
| Phase Encoding Dir. | F >> H |
| Phase Oversampling | 0 % |
| FoV Read | 220 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| TR | 8000.0 ms |
| TE | 96.00 ms |
| Concatenations | 1 |
| AutoAlign | --- |

## Contrast - Common

| TR | 8000.0 ms |
|---|---|
| TE | 96.00 ms |
| MTC | Off |
| Magn. Preparation | None |
| Fat-Water Contrast | Standard |
| Reconstruction | Magnitude |

## Contrast - Dynamic

| Dynamic Mode | Standard |
|---|---|
| Delay in TR | 0.00 ms |

## Resolution - Common

| FoV Read | 220 mm |
|---|---|
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| Base Resolution | 130 |
| Phase Resolution | 100 % |
| Interpolation | Off |

## Resolution - Acceleration

| Acceleration mode | GRAPPA |
|---|---|
| Reference Scans | EPI/Separate |
| Acceleration Factor PE | 2 |
| Reference Lines PE | 40 |
| Phase Partial Fourier | 6/8 |

## Resolution - Filter

| Raw Filter | On |
|---|---|
| Elliptical Filter | Off |

## Resolution - Filter

| Distortion Correction | 2D |
|---|---|
| Normalize | Prescan |
| Noise Masking | Off |

## Geometry - Common

| Slice Group | 1 |
|---|---|
| Slices | 35 |
| Distance Factor | 25 % |
| Position | L0.0 P18.6 H0.6 mm |
| Orientation | C > T-0.7 > S-0.6 |
| Phase Encoding Dir. | F >> H |
| Phase Oversampling | 0 % |
| FoV Read | 220 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| TR | 8000.0 ms |
| Multi-Slice Mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

## Geometry - AutoAlign

| Slice Group | 1 |
|---|---|
| Position | L0.0 P18.6 H0.6 mm |
| Orientation | C > T-0.7 > S-0.6 |
| Phase Encoding Dir. | F >> H |
| AutoAlign | --- |
| Initial Position | L0.0 P18.6 H0.6 |
| L | 0.0 mm |
| P | 18.6 mm |
| H | 0.6 mm |
| Initial Orientation | C > T |
| C > T | -0.70 |
| > S | -0.60 |
| Initial Rotation | 90.00 deg |

## Geometry - Navigator

## Geometry - Saturation

| Special Saturation | None |
|---|---|

## Geometry - Tim Planning Suite

| Set-n-Go Protocol | Off |
|---|---|
| Table Position | 0 mm |
| Table Position | H |
| Inline Composing | Off |

## System - Miscellaneous

| Coil Selection | Auto Coil Select |
|---|---|
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combination | Adaptive Combine |
| Matrix Optimization | Off |
| Coil Focus | Flat |

## System - Adjustments

| Adjustment Strategy | Standard |
|---|---|
| B0 Shim | Standard |
| CoilShim | Off |

## System - Adjustments

| | |
|---|---|
| Adjustment Tolerance | Auto |
| Adjust with Body Coil | Off |
| Confirm Frequency | Never |
| Assume Silicone | Off |

## System - Adjust Volume

| | |
|---|---|
| Position | L0.0 P18.6 H0.6 mm |
| Orientation | C > T-0.7 > S-0.6 |
| Rotation | 90.00 deg |
| F >> H | 220 mm |
| R >> L | 220 mm |
| A >> P | 174 mm |
| Reset | Off |

## System - Tx/Rx

| | |
|---|---|
| Frequency 1H | 63.680140 MHz |
| ? Ref. Amplitude 1H | 0.000 V |
| Reset | Off |
| Image Scaling | 1.000 |

## Physio - Signal

| | |
|---|---|
| 1st Signal/Mode | None |
| TR | 8000.0 ms |
| Concatenations | 1 |

## Physio - PACE

| | |
|---|---|
| Resp. Control | Off |
| Concatenations | 1 |

## Diff

| | |
|---|---|
| Diffusion Mode | 3-Scan Trace |
| Diff. Directions | 3 |
| Diffusion Scheme | Bipolar |
| Diff. Weightings | 5 |
| b-value 1 | 0 s/mm² |
| b-value 2 | 500 s/mm² |
| b-value 3 | 1000 s/mm² |
| b-value 4 | 1500 s/mm² |
| b-value 5 | 2000 s/mm² |
| Averages 1 | 2 |
| Averages 2 | 2 |
| Averages 3 | 2 |
| Averages 4 | 2 |
| Averages 5 | 2 |
| Dynamic Field Correction | Off |
| Invert Gray Scale | Off |
| Diff. Weighted Images | Off |
| Trace Weighted Images | On |
| Tensor | Off |
| FA Maps | Off |
| ADC Maps | On |
| Exponential ADC Maps | Off |
| b-value >= | 0 s/mm² |
| ADC Noise Threshold | 40 |
| Noise Masking | Off |
| Calculated Image | Off |

## Sequence - Part 1

| | |
|---|---|
| Sequence Name | epse |
| Excitation | Standard |
| RF Pulse Type | Normal |
| Gradient Mode | Fast |
| Bandwidth | 1132 Hz/Px |
| Echo Spacing | 0.97 ms |

## Sequence - Part 1

| | |
|---|---|
| Free Echo Spacing | Off |
| Optimization | None |
| EPI Factor | 130 |

## Sequence - Part 2

| | |
|---|---|
| Introduction | On |
| Phase Correction | Internal |

| **\\ZZ_DWI_QIBA\DWI_QIBA\QA_MSC\QA_200622\localizer** |
|---|
| TA: 31 sec Coil Selection: Auto Voxel Size: 1.2×1.2×10.0 mm³ Acc:: None Rel. SNR: 1.00 |

## Properties

| | |
|---|---|
| Start measurement without further preparation | Off |
| Wait for User to Start | Off |
| Start measurements | Single Measurement |
| Prio Recon | Off |
| Auto Open Inline Display | Off |
| Auto Close Inline Display | Off |
| Load Images to MR View&GO | On |
| Auto Store Images | On |
| Load Images to Stamp Segments | On |
| Load Images to Graphic Segments | On |
| Graphic segment | Default |
| Inline Movie | Off |

## Routine

| | |
|---|---|
| Slice Group | 1 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Phase Oversampling | 0 % |
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| TR | 13.0 ms |
| TE | 7.30 ms |
| Averages | 1 |
| Concatenations | 18 |
| AutoAlign | --- |

## Contrast - Common

| | |
|---|---|
| TR | 13.0 ms |
| TE | 7.30 ms |
| TD | 0.00 ms |
| MTC | Off |
| Magn. Preparation | None |
| Flip Angle | 40 deg |
| Fat-Water Contrast | Standard |
| Dark Blood | Off |
| Contrasts | 1 |
| Reconstruction | Magnitude |

## Contrast - Dynamic

| | |
|---|---|
| Dynamic Mode | Standard |
| Measurements | 1 |
| Multiple Series | Each Measurement |

## Resolution - Common

| | |
|---|---|
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| Base Resolution | 256 |
| Phase Resolution | 50 % |
| Interpolation | Off |

## Resolution - Acceleration

| | |
|---|---|
| Acceleration mode | None |
| Phase Partial Fourier | Off |
| Asymmetric Echo | Off |

## Resolution - Filter

| | |
|---|---|
| Raw Filter | Off |
| Elliptical Filter | Off |
| Distortion Correction | 2D |
| Normalize | Off |
| Image Filter | Off |

## Geometry - Common

| | |
|---|---|
| Slice Group | 1 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Phase Oversampling | 0 % |
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| TR | 13.0 ms |
| Multi-Slice Mode | Sequential |
| Series | Interleaved |
| Concatenations | 18 |

## Geometry - AutoAlign

| | |
|---|---|
| Slice Group | 1 |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |

**Geometry - AutoAlign**

| | |
|---|---|
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Orientation | Sagittal |
| Initial Rotation | 0.00 deg |

**Geometry - Saturation**

| | |
|---|---|
| Saturation Mode | Standard |
| Special Saturation | None |

**Geometry - Tim Planning Suite**

| | |
|---|---|
| Set-n-Go Protocol | Off |
| Table Position | 0 mm |
| Table Position | H |
| Inline Composing | Off |

**System - Miscellaneous**

| | |
|---|---|
| Coil Selection | Auto Coil Select |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combination | Adaptive Combine |
| Matrix Optimization | Off |
| Coil Focus | Flat |

**System - Adjustments**

| | |
|---|---|
| Adjustment Strategy | Standard |
| B0 Shim | Tune up |
| CoilShim | Off |
| Adjustment Tolerance | Auto |
| Adjust with Body Coil | Off |
| Confirm Frequency | Never |
| Assume Silicone | Off |

**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 | 63.680140 MHz |
| ? Ref. Amplitude 1H | 0.000 V |
| Reset | Off |
| Image Scaling | 1.000 |

**Physio - Signal**

| | |
|---|---|
| 1st Signal/Mode | None |
| TR | 13.0 ms |
| Segments | 1 |
| Concatenations | 18 |

**Physio - Cardiac**

| | |
|---|---|
| Tagging | None |
| Fat-Water Contrast | Standard |
| Magn. Preparation | None |
| Dark Blood | Off |

**Physio - Cardiac**

| | |
|---|---|
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Phase Resolution | 50 % |
| Dynamic Mode | Standard |

**Physio - PACE**

| | |
|---|---|
| Resp. Control | Off |
| Concatenations | 18 |

**Inline - Liver**

| | |
|---|---|
| Liver Registration | Off |
| Save Original Images | On |

**Inline - Subtraction**

| | |
|---|---|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save Original Images | On |

**Inline - Cardiac**

| | |
|---|---|
| Magn. Preparation | None |
| Save Original Images | On |
| Contrasts | 1 |
| TE | 7.30 ms |
| TR | 13.0 ms |

**Inline - MIP**

| | |
|---|---|
| MIP Sag | Off |
| MIP Cor | Off |
| MIP Tra | Off |
| MIP Time | Off |
| Radial MIP | Off |
| Save Original Images | On |
| MPR Sag | Off |
| MPR Cor | Off |
| MPR Tra | Off |

**Inline - Soft Tissue**

| | |
|---|---|
| Wash-in | Off |
| Wash-out | Off |
| TTP | Off |
| PEI | Off |
| MIP Time | Off |
| Measurements | 1 |

**Inline - Composing**

| | |
|---|---|
| Inline Composing | Off |

**Sequence - Part 1**

| | |
|---|---|
| Sequence Name | fl_rr |
| Dimension | 2D |
| Excitation | Slice-sel. |
| RF Pulse Type | Normal |
| Gradient Mode | Whisper |
| Flow Compensation | Read |
| Bandwidth | 210 Hz/Px |
| Asymmetric Echo | Off |
| Segments | 1 |

**Sequence - Part 2**

| | |
|---|---|
| Introduction | On |
| RF Spoiling | On |
| Acoustic noise reduction | Off |

**Sequence - Assistant**

| SAR Assistant | Off |
|---|---|

### \\ZZ_DWI_QIBA\DWI_QIBA\QA_MSC\QA_200622\QIBA_diff_qa_ax

TA: 3:54 min Coil Selection: Auto Voxel Size: 1.7×1.7×4.0 mm³ Acc:: 2 Rel. SNR: 1.00

## Properties

| | |
|---|---|
| Start measurement without further preparation | Off |
| Wait for User to Start | Off |
| Start measurements | Single Measurement |
| Prio Recon | Off |
| Auto Open Inline Display | Off |
| Auto Close Inline Display | Off |
| Load Images to MR View&GO | On |
| Auto Store Images | On |
| Load Images to Stamp Segments | Off |
| Load Images to Graphic Segments | Off |
| Graphic segment | Default |
| Inline Movie | Off |

## Routine

| Slice Group | 1 |
|---|---|
| Slices | 35 |
| Distance Factor | 25 % |
| Position | R1.4 P17.2 H0.6 mm |
| Orientation | T > C1.0 |
| Phase Encoding Dir. | A >> P |
| Phase Oversampling | 0 % |
| FoV Read | 220 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| TR | 8000.0 ms |
| TE | 96.00 ms |
| Concatenations | 1 |
| AutoAlign | --- |

## Contrast - Common

| | |
|---|---|
| TR | 8000.0 ms |
| TE | 96.00 ms |
| MTC | Off |
| Magn. Preparation | None |
| Fat-Water Contrast | Standard |
| Reconstruction | Magnitude |

## Contrast - Dynamic

| | |
|---|---|
| Dynamic Mode | Standard |
| Delay in TR | 0.00 ms |

## Resolution - Common

| | |
|---|---|
| FoV Read | 220 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| Base Resolution | 130 |
| Phase Resolution | 100 % |
| Interpolation | Off |

## Resolution - Acceleration

| | |
|---|---|
| Acceleration mode | GRAPPA |
| Reference Scans | EPI/Separate |
| Acceleration Factor PE | 2 |
| Reference Lines PE | 40 |
| Phase Partial Fourier | 6/8 |

## Resolution - Filter

| | |
|---|---|
| Raw Filter | On |
| Elliptical Filter | Off |

## Resolution - Filter

| | |
|---|---|
| Distortion Correction | 2D |
| Normalize | Prescan |
| Noise Masking | Off |

## Geometry - Common

| Slice Group | 1 |
|---|---|
| Slices | 35 |
| Distance Factor | 25 % |
| Position | R1.4 P17.2 H0.6 mm |
| Orientation | T > C1.0 |
| Phase Encoding Dir. | A >> P |
| Phase Oversampling | 0 % |
| FoV Read | 220 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| TR | 8000.0 ms |
| Multi-Slice Mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

## Geometry - AutoAlign

| Slice Group | 1 |
|---|---|
| Position | R1.4 P17.2 H0.6 mm |
| Orientation | T > C1.0 |
| Phase Encoding Dir. | A >> P |
| AutoAlign | --- |
| Initial Position | R1.4 P17.2 H0.6 |
| R | 1.4 mm |
| P | 17.2 mm |
| H | 0.6 mm |
| Initial Orientation | T > C |
| T > C | 1.00 |
| > S | 0.00 |
| Initial Rotation | 0.00 deg |

## Geometry - Navigator

## Geometry - Saturation

| | |
|---|---|
| Special Saturation | None |

## Geometry - Tim Planning Suite

| | |
|---|---|
| Set-n-Go Protocol | Off |
| Table Position | 0 mm |
| Table Position | H |
| Inline Composing | Off |

## System - Miscellaneous

| | |
|---|---|
| Coil Selection | Auto Coil Select |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combination | Adaptive Combine |
| Matrix Optimization | Off |
| Coil Focus | Flat |

## System - Adjustments

| | |
|---|---|
| Adjustment Strategy | Standard |
| B0 Shim | Standard |
| CoilShim | Off |

## System - Adjustments

| | |
|---|---|
| Adjustment Tolerance | Auto |
| Adjust with Body Coil | Off |
| Confirm Frequency | Never |
| Assume Silicone | Off |

## System - Adjust Volume

| | |
|---|---|
| Position | R1.4 P17.2 H0.6 mm |
| Orientation | T > C1.0 |
| Rotation | 0.00 deg |
| A >> P | 220 mm |
| R >> L | 220 mm |
| F >> H | 174 mm |
| Reset | Off |

## System - Tx/Rx

| | |
|---|---|
| Frequency 1H | 63.680140 MHz |
| ? Ref. Amplitude 1H | 0.000 V |
| Reset | Off |
| Image Scaling | 1.000 |

## Physio - Signal

| | |
|---|---|
| 1st Signal/Mode | None |
| TR | 8000.0 ms |
| Concatenations | 1 |

## Physio - PACE

| | |
|---|---|
| Resp. Control | Off |
| Concatenations | 1 |

## Diff

| | |
|---|---|
| Diffusion Mode | 3-Scan Trace |
| Diff. Directions | 3 |
| Diffusion Scheme | Bipolar |
| Diff. Weightings | 5 |
| b-value 1 | 0 s/mm² |
| b-value 2 | 500 s/mm² |
| b-value 3 | 1000 s/mm² |
| b-value 4 | 1500 s/mm² |
| b-value 5 | 2000 s/mm² |
| Averages 1 | 2 |
| Averages 2 | 2 |
| Averages 3 | 2 |
| Averages 4 | 2 |
| Averages 5 | 2 |
| Dynamic Field Correction | Off |
| Invert Gray Scale | Off |
| Diff. Weighted Images | Off |
| Trace Weighted Images | On |
| Tensor | Off |
| FA Maps | Off |
| ADC Maps | On |
| Exponential ADC Maps | Off |
| b-value >= | 0 s/mm² |
| ADC Noise Threshold | 40 |
| Noise Masking | Off |
| Calculated Image | Off |

## Sequence - Part 1

| | |
|---|---|
| Sequence Name | epse |
| Excitation | Standard |
| RF Pulse Type | Normal |
| Gradient Mode | Fast |
| Bandwidth | 1132 Hz/Px |
| Echo Spacing | 0.97 ms |

## Sequence - Part 1

| | |
|---|---|
| Free Echo Spacing | Off |
| Optimization | None |
| EPI Factor | 130 |

## Sequence - Part 2

| | |
|---|---|
| Introduction | On |
| Phase Correction | Internal |

**\\ZZ_DWI_QIBA\DWI_QIBA\QA_MSC\QA_200622\localizer**

TA: 31 sec Coil Selection: Auto Voxel Size: 1.2×1.2×10.0 mm³ Acc:: None Rel. SNR: 1.00

## Properties

| | |
|---|---|
| Start measurement without further preparation | Off |
| Wait for User to Start | Off |
| Start measurements | Single Measurement |
| Prio Recon | Off |
| Auto Open Inline Display | Off |
| Auto Close Inline Display | Off |
| Load Images to MR View&GO | On |
| Auto Store Images | On |
| Load Images to Stamp Segments | On |
| Load Images to Graphic Segments | On |
| Graphic segment | Default |
| Inline Movie | Off |

## Routine

| | |
|---|---|
| Slice Group | 1 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Phase Oversampling | 0 % |
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| TR | 13.0 ms |
| TE | 7.30 ms |
| Averages | 1 |
| Concatenations | 18 |
| AutoAlign | --- |

## Contrast - Common

| | |
|---|---|
| TR | 13.0 ms |
| TE | 7.30 ms |
| TD | 0.00 ms |
| MTC | Off |
| Magn. Preparation | None |
| Flip Angle | 40 deg |
| Fat-Water Contrast | Standard |
| Dark Blood | Off |
| Contrasts | 1 |
| Reconstruction | Magnitude |

## Contrast - Dynamic

| | |
|---|---|
| Dynamic Mode | Standard |
| Measurements | 1 |
| Multiple Series | Each Measurement |

## Resolution - Common

| | |
|---|---|
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| Base Resolution | 256 |
| Phase Resolution | 50 % |
| Interpolation | Off |

## Resolution - Acceleration

| | |
|---|---|
| Acceleration mode | None |
| Phase Partial Fourier | Off |
| Asymmetric Echo | Off |

## Resolution - Filter

| | |
|---|---|
| Raw Filter | Off |
| Elliptical Filter | Off |
| Distortion Correction | 2D |
| Normalize | Off |
| Image Filter | Off |

## Geometry - Common

| | |
|---|---|
| Slice Group | 1 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
| Slices | 1 |
| Distance Factor | 20 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Phase Oversampling | 0 % |
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 10.0 mm |
| TR | 13.0 ms |
| Multi-Slice Mode | Sequential |
| Series | Interleaved |
| Concatenations | 18 |

## Geometry - AutoAlign

| | |
|---|---|
| Slice Group | 1 |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 2 |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slice Group | 3 |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |

## Geometry - AutoAlign

| | |
|---|---|
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Orientation | Sagittal |
| Initial Rotation | 0.00 deg |

## Geometry - Saturation

| | |
|---|---|
| Saturation Mode | Standard |
| Special Saturation | None |

## Geometry - Tim Planning Suite

| | |
|---|---|
| Set-n-Go Protocol | Off |
| Table Position | 0 mm |
| Table Position | H |
| Inline Composing | Off |

## System - Miscellaneous

| | |
|---|---|
| Coil Selection | Auto Coil Select |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combination | Adaptive Combine |
| Matrix Optimization | Off |
| Coil Focus | Flat |

## System - Adjustments

| | |
|---|---|
| Adjustment Strategy | Standard |
| B0 Shim | Tune up |
| CoilShim | Off |
| Adjustment Tolerance | Auto |
| Adjust with Body Coil | Off |
| Confirm Frequency | Never |
| Assume Silicone | Off |

## 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 | 63.680140 MHz |
| ? Ref. Amplitude 1H | 0.000 V |
| Reset | Off |
| Image Scaling | 1.000 |

## Physio - Signal

| | |
|---|---|
| 1st Signal/Mode | None |
| TR | 13.0 ms |
| Segments | 1 |
| Concatenations | 18 |

## Physio - Cardiac

| | |
|---|---|
| Tagging | None |
| Fat-Water Contrast | Standard |
| Magn. Preparation | None |
| Dark Blood | Off |

## Physio - Cardiac

| | |
|---|---|
| FoV Read | 300 mm |
| FoV Phase | 100.0 % |
| Phase Resolution | 50 % |
| Dynamic Mode | Standard |

## Physio - PACE

| | |
|---|---|
| Resp. Control | Off |
| Concatenations | 18 |

## Inline - Liver

| | |
|---|---|
| Liver Registration | Off |
| Save Original Images | On |

## Inline - Subtraction

| | |
|---|---|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save Original Images | On |

## Inline - Cardiac

| | |
|---|---|
| Magn. Preparation | None |
| Save Original Images | On |
| Contrasts | 1 |
| TE | 7.30 ms |
| TR | 13.0 ms |

## Inline - MIP

| | |
|---|---|
| MIP Sag | Off |
| MIP Cor | Off |
| MIP Tra | Off |
| MIP Time | Off |
| Radial MIP | Off |
| Save Original Images | On |
| MPR Sag | Off |
| MPR Cor | Off |
| MPR Tra | Off |

## Inline - Soft Tissue

| | |
|---|---|
| Wash-in | Off |
| Wash-out | Off |
| TTP | Off |
| PEI | Off |
| MIP Time | Off |
| Measurements | 1 |

## Inline - Composing

| | |
|---|---|
| Inline Composing | Off |

## Sequence - Part 1

| | |
|---|---|
| Sequence Name | fl_rr |
| Dimension | 2D |
| Excitation | Slice-sel. |
| RF Pulse Type | Normal |
| Gradient Mode | Whisper |
| Flow Compensation | Read |
| Bandwidth | 210 Hz/Px |
| Asymmetric Echo | Off |
| Segments | 1 |

## Sequence - Part 2

| | |
|---|---|
| Introduction | On |
| RF Spoiling | On |
| Acoustic noise reduction | Off |

**Sequence - Assistant**

| | |
|---|---|
| SAR Assistant | Off |

| **\\ZZ_DWI_QIBA\DWI_QIBA\QA_MSC\QA_200622\qiba_diff_qa_sag** |
|---|
| TA: 3:54 min Coil Selection: Auto Voxel Size: 1.7×1.7×4.0 mm³ Acc:: 2 Rel. SNR: 1.00 |

## Properties

| | |
|---|---|
| Start measurement without further preparation | Off |
| Wait for User to Start | Off |
| Start measurements | Single Measurement |
| Prio Recon | Off |
| Auto Open Inline Display | Off |
| Auto Close Inline Display | Off |
| Load Images to MR View&GO | On |
| Auto Store Images | On |
| Load Images to Stamp Segments | Off |
| Load Images to Graphic Segments | Off |
| Graphic segment | Default |
| Inline Movie | Off |

## Routine

| | |
|---|---|
| Slice Group | 1 |
| Slices | 35 |
| Distance Factor | 25 % |
| Position | R1.4 P17.2 H0.6 mm |
| Orientation | Sagittal |
| Phase Encoding Dir. | H >> F |
| Phase Oversampling | 0 % |
| FoV Read | 220 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| TR | 8000.0 ms |
| TE | 96.00 ms |
| Concatenations | 1 |
| AutoAlign | --- |

## Contrast - Common

| | |
|---|---|
| TR | 8000.0 ms |
| TE | 96.00 ms |
| MTC | Off |
| Magn. Preparation | None |
| Fat-Water Contrast | Standard |
| Reconstruction | Magnitude |

## Contrast - Dynamic

| | |
|---|---|
| Dynamic Mode | Standard |
| Delay in TR | 0.00 ms |

## Resolution - Common

| | |
|---|---|
| FoV Read | 220 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| Base Resolution | 130 |
| Phase Resolution | 100 % |
| Interpolation | Off |

## Resolution - Acceleration

| | |
|---|---|
| Acceleration mode | GRAPPA |
| Reference Scans | EPI/Separate |
| Acceleration Factor PE | 2 |
| Reference Lines PE | 40 |
| Phase Partial Fourier | 6/8 |

## Resolution - Filter

| | |
|---|---|
| Raw Filter | On |
| Elliptical Filter | Off |

## Resolution - Filter

| | |
|---|---|
| Distortion Correction | 2D |
| Normalize | Prescan |
| Noise Masking | Off |

## Geometry - Common

| | |
|---|---|
| Slice Group | 1 |
| Slices | 35 |
| Distance Factor | 25 % |
| Position | R1.4 P17.2 H0.6 mm |
| Orientation | Sagittal |
| Phase Encoding Dir. | H >> F |
| Phase Oversampling | 0 % |
| FoV Read | 220 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 4.0 mm |
| TR | 8000.0 ms |
| Multi-Slice Mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

## Geometry - AutoAlign

| | |
|---|---|
| Slice Group | 1 |
| Position | R1.4 P17.2 H0.6 mm |
| Orientation | Sagittal |
| Phase Encoding Dir. | H >> F |
| AutoAlign | --- |
| Initial Position | R1.4 P17.2 H0.6 |
| R | 1.4 mm |
| P | 17.2 mm |
| H | 0.6 mm |
| Initial Orientation | Sagittal |
| Initial Rotation | 90.00 deg |

## Geometry - Navigator

## Geometry - Saturation

| | |
|---|---|
| Special Saturation | None |

## Geometry - Tim Planning Suite

| | |
|---|---|
| Set-n-Go Protocol | Off |
| Table Position | 0 mm |
| Table Position | H |
| Inline Composing | Off |

## System - Miscellaneous

| | |
|---|---|
| Coil Selection | Auto Coil Select |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combination | Adaptive Combine |
| Matrix Optimization | Off |
| Coil Focus | Flat |

## System - Adjustments

| | |
|---|---|
| Adjustment Strategy | Standard |
| B0 Shim | Standard |
| CoilShim | Off |
| Adjustment Tolerance | Auto |
| Adjust with Body Coil | Off |

## System - Adjustments

| | |
|---|---|
| Confirm Frequency | Never |
| Assume Silicone | Off |

## System - Adjust Volume

| | |
|---|---|
| Position | R1.4 P17.2 H0.6 mm |
| Orientation | Sagittal |
| Rotation | 90.00 deg |
| F >> H | 220 mm |
| A >> P | 220 mm |
| R >> L | 174 mm |
| Reset | Off |

## System - Tx/Rx

| | |
|---|---|
| Frequency 1H | 63.680140 MHz |
| ? Ref. Amplitude 1H | 0.000 V |
| Reset | Off |
| Image Scaling | 1.000 |

## Physio - Signal

| | |
|---|---|
| 1st Signal/Mode | None |
| TR | 8000.0 ms |
| Concatenations | 1 |

## Physio - PACE

| | |
|---|---|
| Resp. Control | Off |
| Concatenations | 1 |

## Diff

| | |
|---|---|
| Diffusion Mode | 3-Scan Trace |
| Diff. Directions | 3 |
| Diffusion Scheme | Bipolar |
| Diff. Weightings | 5 |
| b-value 1 | 0 s/mm² |
| b-value 2 | 500 s/mm² |
| b-value 3 | 1000 s/mm² |
| b-value 4 | 1500 s/mm² |
| b-value 5 | 2000 s/mm² |
| Averages 1 | 2 |
| Averages 2 | 2 |
| Averages 3 | 2 |
| Averages 4 | 2 |
| Averages 5 | 2 |
| Dynamic Field Correction | Off |
| Invert Gray Scale | Off |
| Diff. Weighted Images | Off |
| Trace Weighted Images | On |
| Tensor | Off |
| FA Maps | Off |
| ADC Maps | On |
| Exponential ADC Maps | Off |
| b-value >= | 0 s/mm² |
| ADC Noise Threshold | 40 |
| Noise Masking | Off |
| Calculated Image | Off |

## Sequence - Part 1

| | |
|---|---|
| Sequence Name | epse |
| Excitation | Standard |
| RF Pulse Type | Normal |
| Gradient Mode | Fast |
| Bandwidth | 1132 Hz/Px |
| Echo Spacing | 0.97 ms |
| Free Echo Spacing | Off |
| Optimization | None |

## Sequence - Part 1

| | |
|---|---|
| EPI Factor | 130 |

## Sequence - Part 2

| | |
|---|---|
| Introduction | On |
| Phase Correction | Internal |

**\\ZZ_DWI_QIBA\DWI_QIBA\QA_MSC\QA_200622\QIBA_qa_vibe_sag_iso**

TA: 2:43 min Coil Selection: Auto Voxel Size: 1.0×1.0×1.0 mm³ Acc:: 2 Rel. SNR: 1.00

## Properties

| | |
|---|---|
| Start measurement without further preparation | On |
| Wait for User to Start | Off |
| Start measurements | Single Measurement |
| Prio Recon | Off |
| Auto Open Inline Display | Off |
| Auto Close Inline Display | Off |
| Load Images to MR View&GO | On |
| Auto Store Images | On |
| Load Images to Stamp Segments | On |
| Load Images to Graphic Segments | Off |
| Graphic segment | Default |
| Inline Movie | Off |

## Routine

| | |
|---|---|
| Slab Group | 1 |
| Slabs | 1 |
| Distance Factor | 20 % |
| Position | R1.4 P18.6 H0.7 mm |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slices per Slab | 192 |
| Phase Oversampling | 0 % |
| Slice Oversampling | 0.0 % |
| FoV Read | 250 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 1.0 mm |
| TR | 6.0 ms |
| TE | 2.38 ms |
| Averages | 1 |
| Concatenations | 1 |
| AutoAlign | Head > Orbits |

## Contrast - Common

| | |
|---|---|
| TR | 6.0 ms |
| TE | 2.38 ms |
| Flip Angle | 10 deg |
| Fat-Water Contrast | Standard |
| Contrasts | 1 |
| Reconstruction | Magnitude |

## Contrast - Dynamic

| | |
|---|---|
| Dynamic Mode | Standard |
| Temporal Interpolation | 1 |
| Measurements | 1 |
| Multiple Series | Off |
| 3D Reordering | Standard |
| Time to Center | 82.6 s |
| Burn Time to Center | Off |

## Resolution - Common

| | |
|---|---|
| FoV Read | 250 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 1.0 mm |
| Base Resolution | 256 |
| Phase Resolution | 100 % |
| Slice Resolution | 100 % |
| Trajectory | Cartesian |
| Interpolation | Off |

## Resolution - Acceleration

| | |
|---|---|
| Acceleration mode | GRAPPA |
| Total Factor | 2 |
| Reference Scans | Integrated |
| Acceleration Factor PE | 2 |
| Reference Lines PE | 24 |
| Acceleration Factor 3D | 1 |
| Phase Partial Fourier | Off |
| Slice Partial Fourier | Off |
| Asymmetric Echo | Weak |
| Elliptical Scanning | Off |

## Resolution - Filter

| | |
|---|---|
| Raw Filter | Off |
| Elliptical Filter | On |
| POCS | Off |
| Distortion Correction | 2D |
| Normalize | Prescan |
| Noise Masking | Off |
| Image Filter | Off |

## Geometry - Common

| | |
|---|---|
| Slab Group | 1 |
| Slabs | 1 |
| Distance Factor | 20 % |
| Position | R1.4 P18.6 H0.7 mm |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| Slices per Slab | 192 |
| Phase Oversampling | 0 % |
| Slice Oversampling | 0.0 % |
| FoV Read | 250 mm |
| FoV Phase | 100.0 % |
| Slice Thickness | 1.0 mm |
| TR | 6.0 ms |
| Series | Ascending |
| Concatenations | 1 |

## Geometry - AutoAlign

| | |
|---|---|
| Slab Group | 1 |
| Position | R1.4 P18.6 H0.7 mm |
| Orientation | Sagittal |
| Phase Encoding Dir. | A >> P |
| AutoAlign | Head > Orbits |
| Initial Position | R1.4 P18.6 H0.7 |
| R | 1.4 mm |
| P | 18.6 mm |
| H | 0.7 mm |
| Initial Orientation | Sagittal |
| Initial Rotation | 0.00 deg |

## Geometry - Saturation

| | |
|---|---|
| Special Saturation | None |

## Geometry - Tim Planning Suite

| | |
|---|---|
| Set-n-Go Protocol | Off |
| Table Position | 0 mm |
| Table Position | H |
| Inline Composing | Off |

## System - Miscellaneous

| Coil Selection | Auto Coil Select |
|---|---|
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combination | Adaptive Combine |
| Matrix Optimization | Off |
| Coil Focus | Flat |

## System - Adjustments

| Adjustment Strategy | Standard |
|---|---|
| B0 Shim | Standard |
| CoilShim | Off |
| Adjustment Tolerance | Auto |
| Adjust with Body Coil | Off |
| Confirm Frequency | Never |
| Assume Silicone | Off |

## System - Adjust Volume

| Position | R1.4 P18.6 H0.7 mm |
|---|---|
| Orientation | Sagittal |
| Rotation | 0.00 deg |
| A >> P | 250 mm |
| F >> H | 250 mm |
| R >> L | 192 mm |
| Reset | Off |

## System - Tx/Rx

| Frequency 1H | 63.680140 MHz |
|---|---|
| ? Ref. Amplitude 1H | 0.000 V |
| Reset | Off |
| Image Scaling | 1.000 |

## Physio - PACE

| Resp. Control | Off |
|---|---|
| Concatenations | 1 |

## Inline - Liver

| Liver Registration | Off |
|---|---|
| Save Original Images | On |

## Inline - Subtraction

| Subtract | Off |
|---|---|
| Measurements | 1 |
| StdDev | Off |
| Save Original Images | On |

## Inline - Cardiac

| Save Original Images | On |
|---|---|
| Contrasts | 1 |
| TE | 2.38 ms |
| TR | 6.0 ms |

## Inline - MIP

| MIP Sag | Off |
|---|---|
| MIP Cor | Off |
| MIP Tra | Off |
| MIP Time | Off |
| Radial MIP | Off |
| Save Original Images | On |
| MPR Sag | Off |
| MPR Cor | Off |
| MPR Tra | Off |

## Inline - Soft Tissue

| Wash-in | Off |
|---|---|
| Wash-out | Off |
| TTP | Off |
| PEI | Off |
| MIP Time | Off |
| Measurements | 1 |

## Inline - Composing

| Inline Composing | Off |
|---|---|

## Sequence - Part 1

| Sequence Name | fl |
|---|---|
| Dimension | 3D |
| Excitation | Slab-sel. |
| RF Pulse Type | Normal |
| Gradient Mode | Normal |
| Bandwidth | 810 Hz/Px |
| Asymmetric Echo | Weak |
| Optimization | None |

## Sequence - Part 2

| Introduction | On |
|---|---|
| RF Spoiling | On |
| Incr. Gradient Spoiling | On |
| Breast Application | Off |

## Sequence - Assistant

| SAR Assistant | Off |
|---|---|
| Optimization | None |