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\\USER

2019_MBC_PROTOCOLS_VE11C

SB.2002.60 MR DEVELOPMENT - RS

SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110

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| |
|---|
| \\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\localizer * |
| TA: 0:10 PM: REF Voxel size: 0.5×0.5×7.0 mmPAT: Off Rel. SNR: 1.00 : fl |

Properties

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

Contrast - Dynamic

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

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 250 mm |
| FoV phase | 100.0 % |
| Slice thickness | 7.0 mm |
| Base resolution | 256 |
| Phase resolution | 91 % |
| Phase partial Fourier | Off |
| Interpolation | On |

Routine

| | |
|--------------------|--------------------------------------|
| Slice group | 1 |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | L0.0 A20.0 H0.0 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Slice group | 2 |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | L0.0 A20.0 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slice group | 3 |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | L0.0 A20.0 H0.0 mm |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 250 mm |
| FoV phase | 100.0 % |
| Slice thickness | 7.0 mm |
| TR | 7.5 ms |
| TE | 3.69 ms |
| Averages | 2 |
| Concatenations | 3 |
| Filter | Prescan Normalize, Elliptical filter |
| Coil elements | HE1-4 |

Resolution - iPAT

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

Resolution - Filter Image

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

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|------------------|--------------------|
| Slice group | 1 |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | L0.0 A20.0 H0.0 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Slice group | 2 |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | L0.0 A20.0 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slice group | 3 |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | L0.0 A20.0 H0.0 mm |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| FoV read | 250 mm |
| FoV phase | 100.0 % |
| Slice thickness | 7.0 mm |
| TR | 7.5 ms |
| Multi-slice mode | Sequential |
| Series | Interleaved |
| Concatenations | 3 |

Contrast - Common

| | |
|-------------------|---------|
| TR | 7.5 ms |
| TE | 3.69 ms |
| TD | 0 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | None |
| Water suppr. | None |
| SWI | Off |

Contrast - Dynamic

| | |
|----------------|------------|
| Averages | 2 |
| Averaging mode | Short term |

Geometry - AutoAlign

| | |
|-------------|--------------------|
| Slice group | 1 |
| Position | L0.0 A20.0 H0.0 mm |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Slice group | 2 |
| Position | L0.0 A20.0 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slice group | 3 |
| Position | L0.0 A20.0 H0.0 mm |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| AutoAlign | --- |
| Initial Position | L0.0 A20.0 H0.0 |
| L | 0.0 mm |
| A | 20.0 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Saturation

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

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 | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| 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 - pTx Volumes

| | |
|--------------|------------|
| B1 Shim mode | TrueForm |
| Excitation | Slice-sel. |

System - Tx/Rx

| | |
|-------------------|----------------|
| Frequency 1H | 123.237846 MHz |
| Correction factor | 1 |
| Gain | High |

System - Tx/Rx

| | |
|---------------------|---------|
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ? Ref. amplitude 1H | 0.000 V |

Physio - Signal1

| | |
|-----------------|--------|
| 1st Signal/Mode | None |
| TR | 7.5 ms |
| Concatenations | 3 |
| Segments | 1 |

Physio - Cardiac

| | |
|-------------------|---------|
| Magn. preparation | None |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 250 mm |
| FoV phase | 100.0 % |
| Phase resolution | 91 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 3 |

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 |
|------------------|-----|

Inline - MapIt

| | |
|----------------------|---------|
| Save original images | On |
| MapIt | None |
| Flip angle | 20 deg |
| Measurements | 1 |
| Contrasts | 1 |
| TR | 7.5 ms |
| TE | 3.69 ms |

Sequence - Part 1

| | |
|---------------------|---------|
| Introduction | Off |
| Dimension | 2D |
| Phase stabilisation | Off |
| Asymmetric echo | Allowed |
| Contrasts | 1 |
| Flow comp. | No |

Sequence - Part 1

| | |
|------------------|------------|
| Multi-slice mode | Sequential |
| Bandwidth | 320 Hz/Px |

Sequence - Part 2

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

Sequence - Assistant

| | |
|---------------|-----|
| Mode | Off |
| Allowed delay | 0 s |

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\gre_field_mapping *

TA: 0:26 PM: REF Voxel size: 3.0×3.0×6.0 mmRel. SNR: 1.00 : fm_r

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|-------------|
| Slice group | 1 |
| Slices | 18 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| TR | 200.0 ms |
| TE 1 | 4.92 ms |
| TE 2 | 7.38 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | HE1-4 |

Contrast - Common

| | |
|------------|----------|
| TR | 200.0 ms |
| TE 1 | 4.92 ms |
| TE 2 | 7.38 ms |
| MTC | Off |
| Flip angle | 60 deg |
| Fat suppr. | None |

Contrast - Dynamic

| | |
|-----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Phase |
| Measurements | 1 |
| Multiple series | Off |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - Filter Image

| | |
|--------------|-----|
| Image Filter | Off |
|--------------|-----|

Resolution - Filter Image

| | |
|-------------------|-----|
| 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 | 18 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| TR | 200.0 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 90.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

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

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

System - Adjustments

| | |
|-----------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |

System - Adjustments

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

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 90.00 deg |
| R >> L | 192 mm |
| A >> P | 192 mm |
| F >> H | 134 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
|--------------|----------|

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ? Ref. amplitude 1H | 0.000 V |

Sequence - Part 1

| | |
|------------------|-------------|
| Introduction | Off |
| Dimension | 2D |
| Asymmetric echo | Off |
| Contrasts | 2 |
| Flow comp. | Yes |
| Multi-slice mode | Interleaved |
| Bandwidth | 290 Hz/Px |

Sequence - Part 2

| | |
|---------------|--------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| RF spoiling | On |

Sequence - Assistant

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

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\t1_fl2d_sag *

TA: 0:17 PM: REF Voxel size: 1.4×1.4×6.0 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 | On |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| 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 | 12 |
| Dist. factor | 30 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | Head > Basis |
| Phase oversampling | 30 % |
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| TR | 100.0 ms |
| TE | 2.46 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Prescan Normalize, Elliptical filter |
| Coil elements | HE1-4 |

Contrast - Common

| | |
|-------------------|----------|
| TR | 100.0 ms |
| TE | 2.46 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 70 deg |
| Fat suppr. | None |
| Water suppr. | None |
| SWI | Off |

Contrast - Dynamic

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

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| Base resolution | 160 |
| Phase resolution | 80 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

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

Resolution - Filter Image

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

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|------------------|-------------|
| Slice group | 1 |
| Slices | 12 |
| Dist. factor | 30 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| TR | 100.0 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|--------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | Head > Basis |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Saturation

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

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 |

System - Miscellaneous

| | |
|------------------|----------------------|
| AutoAlign | Head > Basis |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| 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 - pTx Volumes

| | |
|--------------|------------|
| B1 Shim mode | TrueForm |
| Excitation | Slice-sel. |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 100.0 ms |
| Concatenations | 1 |
| Segments | 1 |

Physio - Cardiac

| | |
|-------------------|---------|
| Magn. preparation | None |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Phase resolution | 80 % |

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 |

Inline - MIP

| | |
|----------------------|----|
| 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 |
|------------------|-----|

Inline - MapIt

| | |
|----------------------|----------|
| Save original images | On |
| MapIt | None |
| Flip angle | 70 deg |
| Measurements | 1 |
| Contrasts | 1 |
| TR | 100.0 ms |
| TE | 2.46 ms |

Sequence - Part 1

| | |
|---------------------|-------------|
| Introduction | Off |
| Dimension | 2D |
| Phase stabilisation | Off |
| Asymmetric echo | Allowed |
| Contrasts | 1 |
| Flow comp. | No |
| Multi-slice mode | Interleaved |
| Bandwidth | 320 Hz/Px |

Sequence - Part 2

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

Sequence - Assistant

| | |
|---------------|----------|
| Mode | TR |
| Max. TR | 550.0 ms |
| Allowed delay | 60 s |

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\t2_tse_tra_p2 *

TA: 0:14 PM: REF Voxel size: 0.9×0.9×6.0 mmPAT: 2 Rel. SNR: 1.00 : tse

Properties

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

Resolution - iPAT

| | |
|---------------------|------------|
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 38 |
| Reference scan mode | Integrated |

Resolution - Filter Image

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

Routine

| | |
|--------------------|-------------------|
| Slice group | 1 |
| Slices | 12 |
| Dist. factor | 30 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| AutoAlign | Head > Brain |
| Phase oversampling | 30 % |
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| TR | 2000.0 ms |
| TE | 26.0 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Prescan Normalize |
| Coil elements | HE1-4 |

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|------------------|-------------|
| Slice group | 1 |
| Slices | 12 |
| Dist. factor | 30 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| TR | 2000.0 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Contrast - Common

| | |
|-------------------|-----------|
| TR | 2000.0 ms |
| TE | 26.0 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 150 deg |
| Fat suppr. | None |
| Water suppr. | None |
| Restore magn. | Off |

Contrast - Dynamic

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

Resolution - Common

| | |
|-----------------------|-----------|
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| Base resolution | 128 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Trajectory | Cartesian |
| Interpolation | On |

Geometry - AutoAlign

| | |
|---------------------|--------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| AutoAlign | Head > Brain |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 90.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

| | |
|---------------|------|
| Fat suppr. | None |
| Water suppr. | None |
| Restore magn. | Off |
| Special sat. | None |

Geometry - Navigator

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | REF |
| 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 | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | Head > Brain |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| 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 - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
|--------------|----------|

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 2000.0 ms |
| Concatenations | 1 |

Physio - Cardiac

| | |
|-------------------|-----------|
| Magn. preparation | None |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |
| Trajectory | Cartesian |

Physio - PACE

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

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 | Off |
| Dimension | 2D |
| Compensate T2 decay | Off |
| Reduce Motion Sens. | Off |
| Contrasts | 1 |
| Flow comp. | No |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 8.82 ms |
| Bandwidth | 219 Hz/Px |

Sequence - Part 2

| | |
|--------------------------|--------------|
| Define | Turbo factor |
| Echo trains per slice | 6 |
| Phase correction | Automatic |
| Acoustic noise reduction | None |
| RF pulse type | Normal |
| Gradient mode | Normal |
| Hyperecho | Off |
| WARP | Off |
| Red. EC sensitivity | Off |
| Turbo factor | 17 |

Sequence - Assistant

| | |
|---------------|-----------|
| Mode | TR |
| Max. TR | 7500.0 ms |
| Allowed delay | 60 s |

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\t1_mp2rage *

TA: 0:24 PM: REF Voxel size: 1.1x1.1x5.0 mmPAT: 1.0 Rel. SNR: 1.00 : WIP_cmp

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|-------------------|
| Slab group | 1 |
| Slabs | 1 |
| Dist. factor | 50 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 40 |
| FoV read | 256 mm |
| FoV phase | 93.8 % |
| Slice thickness | 5.00 mm |
| TR | 2600.0 ms |
| TE | 2.82 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Prescan Normalize |
| Coil elements | HE1-4 |

Contrast - Common

| | |
|-------------------|-------------|
| TR | 2600.0 ms |
| TE | 2.82 ms |
| Magn. preparation | Non-sel. IR |
| TI 1 | 600 ms |
| TI 2 | 2000 ms |
| Flip angle 1 | 5 deg |
| Flip angle 2 | 5 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magn./Phase |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|------------------|---------|
| FoV read | 256 mm |
| FoV phase | 93.8 % |
| Slice thickness | 5.00 mm |
| Base resolution | 224 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |

Resolution - Common

| | |
|-----------------------|-----|
| Phase partial Fourier | Off |
| Slice partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

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

Resolution - Filter Image

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

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|--------------------|-------------|
| Slab group | 1 |
| Slabs | 1 |
| Dist. factor | 50 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Slice oversampling | 0.0 % |
| Slices per slab | 40 |
| FoV read | 256 mm |
| FoV phase | 93.8 % |
| Slice thickness | 5.00 mm |
| TR | 2600.0 ms |
| Multi-slice mode | Single shot |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-----------|
| Slab group | 1 |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 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 |

System - Miscellaneous

| | |
|---------------------|------------------|
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Performance |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-----------|
| Position | Isocenter |
| Orientation | Sagittal |
| Rotation | 0.00 deg |
| A >> P | 240 mm |
| F >> H | 256 mm |
| R >> L | 200 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Non-sel. |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ? Ref. amplitude 1H | 0.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 2600.0 ms |
| Concatenations | 1 |

Physio - Cardiac

| | |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| TI 1 | 600 ms |
| TI 2 | 2000 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 256 mm |
| FoV phase | 93.8 % |
| Phase resolution | 100 % |

Physio - PACE

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

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 |
|------------------|-----|

Inline - MapIt

| | |
|----------------------|-----------|
| Save original images | On |
| MapIt | T1 map |
| Flip angle 1 | 5 deg |
| Flip angle 2 | 5 deg |
| Measurements | 1 |
| Contrasts | 1 |
| TR | 2600.0 ms |
| TE | 2.82 ms |

Sequence - Part 1

| | |
|---------------------|-------------|
| Introduction | Off |
| Dimension | 3D |
| Elliptical scanning | Off |
| Reordering | Linear |
| Asymmetric echo | Off |
| Contrasts | 1 |
| Flow comp. | No |
| Multi-slice mode | Single shot |
| Echo spacing | 6.6 ms |
| Bandwidth | 240 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|----------|
| RF pulse type | Fast |
| Gradient mode | Fast |
| Excitation | Non-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 40 |

Sequence - Special

| | |
|---------------------|----------|
| Sparse Sampling | On |
| US | 4.6 x |
| Samples/TR | 175 |
| Density | 0.50 |
| Jitter Radius | 1.2 |
| Reference Scan | External |
| No. Ref-Lines | 32 |
| Centric | Off |
| Virtual Coils | Off |
| No. Iterations | 20 |
| CSM RO Resolution | 0 |
| Regularisation INV1 | 0.00100 |
| Regularisation INV2 | 0.00040 |
| Uniform | On |
| Denoised UNI | On |
| FLAWS | Off |
| FLAWS-hc | Off |
| FLAWS-hc inv. | Off |
| Division image | Off |
| Synthetic TI 0 | 410 ms |
| Synthetic TI 1 | 1100 ms |
| Denoise Lambda | 1 |
| Scaling | 0 10^ |
| Echo Averaging | Off |

Sequence - Special

| | |
|----------------|-----|
| FID Monitoring | Off |
|----------------|-----|

Sequence - Assistant

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

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\t2s_megre *

TA: 0:24 PM: FIX Voxel size: 3.6×3.6×5.0 mmPAT: 3 Rel. SNR: 1.00 : fl_r

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|--------------------------------------|
| Slab group | 1 |
| Slabs | 1 |
| Dist. factor | 20 % |
| Position | Isocenter |
| Orientation | Coronal |
| Phase enc. dir. | F >> H |
| AutoAlign | --- |
| Phase oversampling | 10 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 30 |
| FoV read | 230 mm |
| FoV phase | 90.6 % |
| Slice thickness | 5.00 mm |
| TR | 25.0 ms |
| TE 1 | 10.00 ms |
| TE 2 | 15.00 ms |
| TE 3 | 20.00 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Prescan Normalize, Elliptical filter |
| Coil elements | HE1-4 |

Contrast - Common

| | |
|-------------------|----------|
| TR | 25.0 ms |
| TE 1 | 10.00 ms |
| TE 2 | 15.00 ms |
| TE 3 | 20.00 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 15 deg |
| Fat suppr. | None |
| Water suppr. | None |
| SWI | Off |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magn./Phase |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------|--------|
| FoV read | 230 mm |
| FoV phase | 90.6 % |

Resolution - Common

| | |
|-----------------------|---------|
| Slice thickness | 5.00 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | Off |
| Slice partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|---------------------|------------|
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 1 |
| Reference scan mode | Integrated |

Resolution - Filter Image

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

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|--------------------|-------------|
| Slab group | 1 |
| Slabs | 1 |
| Dist. factor | 20 % |
| Position | Isocenter |
| Orientation | Coronal |
| Phase enc. dir. | F >> H |
| Slice oversampling | 0.0 % |
| Slices per slab | 30 |
| FoV read | 230 mm |
| FoV phase | 90.6 % |
| Slice thickness | 5.00 mm |
| TR | 25.0 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-----------|
| Slab group | 1 |
| Position | Isocenter |
| Orientation | Coronal |
| Phase enc. dir. | F >> H |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 90.00 deg |
| Initial Orientation | Coronal |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
|-----------------|----------|

Geometry - Saturation

| | |
|--------------|------|
| Fat suppr. | None |
| Water suppr. | None |
| 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 | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-----------|
| Position | Isocenter |
| Orientation | Coronal |
| Rotation | 90.00 deg |
| F >> H | 209 mm |
| R >> L | 230 mm |
| A >> P | 150 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|-----------|
| B1 Shim mode | TrueForm |
| Excitation | Slab-sel. |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ? Ref. amplitude 1H | 0.000 V |

Physio - Signal1

| | |
|-----------------|---------|
| 1st Signal/Mode | None |
| TR | 25.0 ms |
| Concatenations | 1 |
| Segments | 1 |

Physio - Cardiac

| | |
|-------------------|--------|
| Magn. preparation | None |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 230 mm |
| FoV phase | 90.6 % |
| 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 |
|------------------|-----|

Inline - MapIt

| | |
|----------------------|----------|
| Noise threshold | 15 |
| Save original images | On |
| MapIt | R2* map |
| Flip angle | 15 deg |
| Measurements | 1 |
| Contrasts | 3 |
| TR | 25.0 ms |
| TE 1 | 10.00 ms |
| TE 2 | 15.00 ms |
| TE 3 | 20.00 ms |

Sequence - Part 1

| | |
|---------------------|-------------|
| Introduction | Off |
| Dimension | 3D |
| Elliptical scanning | On |
| Phase stabilisation | Off |
| Asymmetric echo | Off |
| Contrasts | 3 |
| Flow comp. 1 | Yes |
| Readout mode | Monopolar |
| Multi-slice mode | Interleaved |
| Bandwidth 1 | 310 Hz/Px |
| Bandwidth 2 | 310 Hz/Px |
| Bandwidth 3 | 310 Hz/Px |

Sequence - Part 2

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

Sequence - Assistant

| | |
|---------------|-----|
| Mode | Off |
| Allowed delay | 0 s |

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\ep2d_se_ap *

TA: 0:12 PM: REF Voxel size: 1.5×1.5×4.0 mmPAT: 2 Rel. SNR: 1.00 : epse

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|----------------------------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 3000 ms |
| TE | 60.0 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Raw filter, Prescan Normalize |
| Coil elements | HE1-4 |

Contrast - Common

| | |
|-------------------|----------|
| TR | 3000 ms |
| TE | 60.0 ms |
| MTC | Off |
| Magn. preparation | None |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |

Contrast - Dynamic

| | |
|----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | On |

Resolution - iPAT

| | |
|-------------|--------|
| Accel. mode | GRAPPA |
|-------------|--------|

Resolution - iPAT

| | |
|---------------------|--------------|
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Reference scan mode | EPI/separate |

Resolution - Filter Image

| | |
|---------------------|-----|
| Distortion Corr. | Off |
| Prescan Normalize | On |
| Dynamic Field Corr. | Off |

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 3000 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | -0.01 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

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

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 |
| Matrix Optimization | Off |

System - Miscellaneous

| | |
|------------------|----------------------|
| AutoAlign | --- |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | -0.01 deg |
| A >> P | 192 mm |
| R >> L | 192 mm |
| F >> H | 124 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 3000 ms |
| Concatenations | 1 |

Physio - PACE

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

Diff - Neuro

| | |
|-----------------------|---------------------|
| Diffusion mode | Slice |
| Diff. directions | 1 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| FA maps | Off |
| Mosaic | Off |
| Tensor | Off |
| Noise level | 40 |

Diff - Body

| | |
|------------------|---------------------|
| Diffusion mode | Slice |
| Diff. directions | 1 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |

Diff - Body

| | |
|-----------------------|---------------------|
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| Exponential ADC Maps | Off |
| FA maps | Off |
| Invert Gray Scale | Off |
| Calculated Image | Off |
| b-Value >= | 0 s/mm ² |
| Noise level | 40 |

Diff - Composing

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

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Optimization | None |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 64 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Excitation | Standard |

Sequence - pTX Pulses

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\ep2d_se_pa *

TA: 0:12 PM: REF Voxel size: 1.5×1.5×4.0 mmPAT: 2 Rel. SNR: 1.00 : epse

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - iPAT

| | |
|---------------------|--------------|
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Reference scan mode | EPI/separate |

Resolution - Filter Image

| | |
|---------------------|-----|
| Distortion Corr. | Off |
| Prescan Normalize | On |
| Dynamic Field Corr. | Off |

Resolution - Filter Rawdata

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

Routine

| | |
|--------------------|----------------------------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 3000 ms |
| TE | 60.0 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Raw filter, Prescan Normalize |
| Coil elements | HE1-4 |

Geometry - Common

| | |
|------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 3000 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 180.00 deg |
| Initial Orientation | Transversal |

Contrast - Common

| | |
|-------------------|----------|
| TR | 3000 ms |
| TE | 60.0 ms |
| MTC | Off |
| Magn. preparation | None |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |

Contrast - Dynamic

| | |
|----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | On |

Resolution - iPAT

| | |
|-------------|--------|
| Accel. mode | GRAPPA |
|-------------|--------|

Geometry - Saturation

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

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 |
| Matrix Optimization | Off |

System - Miscellaneous

| | |
|------------------|----------------------|
| AutoAlign | --- |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 180.00 deg |
| A >> P | 192 mm |
| R >> L | 192 mm |
| F >> H | 124 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 3000 ms |
| Concatenations | 1 |

Physio - PACE

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

Diff - Neuro

| | |
|-----------------------|---------------------|
| Diffusion mode | Slice |
| Diff. directions | 1 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| FA maps | Off |
| Mosaic | Off |
| Tensor | Off |
| Noise level | 40 |

Diff - Body

| | |
|------------------|---------------------|
| Diffusion mode | Slice |
| Diff. directions | 1 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |

Diff - Body

| | |
|-----------------------|---------------------|
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| Exponential ADC Maps | Off |
| FA maps | Off |
| Invert Gray Scale | Off |
| Calculated Image | Off |
| b-Value >= | 0 s/mm ² |
| Noise level | 40 |

Diff - Composing

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

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Optimization | None |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 64 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Excitation | Standard |

Sequence - pTX Pulses

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\ep2d_fid_basic_bold_p2_task *

TA: 0:20 PM: REF Voxel size: 3.0×3.0×4.0 mmPAT: 2 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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - iPAT

| | |
|---------------------|--------------|
| Ref. lines PE | 24 |
| Reference scan mode | EPI/separate |

Resolution - Filter Image

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

Resolution - Filter Rawdata

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

Routine

| | |
|--------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 2800 ms |
| TE | 30.0 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | HE1-4 |

Geometry - Common

| | |
|------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 2800 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Contrast - Common

| | |
|------------|----------|
| TR | 2800 ms |
| TE | 30.0 ms |
| MTC | Off |
| Flip angle | 90 deg |
| Fat suppr. | Fat sat. |

Contrast - Dynamic

| | |
|-----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 4 |
| Delay in TR | 1000 ms |
| Multiple series | Off |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|------------------|--------|
| Accel. mode | GRAPPA |
| Accel. factor PE | 2 |

Geometry - Saturation

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

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 | Sum of Squares |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| 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 | 192 mm |
| R >> L | 192 mm |
| F >> H | 124 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 2800 ms |
| Concatenations | 1 |

Perf

| | |
|--------------|-----|
| GBP | Off |
| PBP | Off |
| TTP | Off |
| relCBV | Off |
| relCBF | Off |
| relMTT | Off |
| relCBVCorr | Off |
| Measurements | 4 |

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 64 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Excitation | Standard |

Sequence - pTX Pulses

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\ep2d_se_ap *

TA: 0:12 PM: REF Voxel size: 1.5×1.5×4.0 mmPAT: 2 Rel. SNR: 1.00 : epse

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - iPAT

| | |
|---------------------|--------------|
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Reference scan mode | EPI/separate |

Resolution - Filter Image

| | |
|---------------------|-----|
| Distortion Corr. | Off |
| Prescan Normalize | On |
| Dynamic Field Corr. | Off |

Resolution - Filter Rawdata

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

Routine

| | |
|--------------------|----------------------------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 3000 ms |
| TE | 60.0 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Raw filter, Prescan Normalize |
| Coil elements | HE1-4 |

Geometry - Common

| | |
|------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 3000 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | -0.01 deg |
| Initial Orientation | Transversal |

Contrast - Common

| | |
|-------------------|----------|
| TR | 3000 ms |
| TE | 60.0 ms |
| MTC | Off |
| Magn. preparation | None |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |

Contrast - Dynamic

| | |
|----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | On |

Resolution - iPAT

| | |
|-------------|--------|
| Accel. mode | GRAPPA |
|-------------|--------|

Geometry - Saturation

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

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 |
| Matrix Optimization | Off |

System - Miscellaneous

| | |
|------------------|----------------------|
| AutoAlign | --- |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | -0.01 deg |
| A >> P | 192 mm |
| R >> L | 192 mm |
| F >> H | 124 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 3000 ms |
| Concatenations | 1 |

Physio - PACE

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

Diff - Neuro

| | |
|-----------------------|---------------------|
| Diffusion mode | Slice |
| Diff. directions | 1 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| FA maps | Off |
| Mosaic | Off |
| Tensor | Off |
| Noise level | 40 |

Diff - Body

| | |
|------------------|---------------------|
| Diffusion mode | Slice |
| Diff. directions | 1 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |

Diff - Body

| | |
|-----------------------|---------------------|
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| Exponential ADC Maps | Off |
| FA maps | Off |
| Invert Gray Scale | Off |
| Calculated Image | Off |
| b-Value >= | 0 s/mm ² |
| Noise level | 40 |

Diff - Composing

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

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Optimization | None |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 64 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Excitation | Standard |

Sequence - pTX Pulses

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\ep2d_se_pa *

TA: 0:12 PM: REF Voxel size: 1.5×1.5×4.0 mmPAT: 2 Rel. SNR: 1.00 : epse

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - iPAT

| | |
|---------------------|--------------|
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Reference scan mode | EPI/separate |

Resolution - Filter Image

| | |
|---------------------|-----|
| Distortion Corr. | Off |
| Prescan Normalize | On |
| Dynamic Field Corr. | Off |

Resolution - Filter Rawdata

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

Routine

| | |
|--------------------|----------------------------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 3000 ms |
| TE | 60.0 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Raw filter, Prescan Normalize |
| Coil elements | HE1-4 |

Geometry - Common

| | |
|------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 3000 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | -180.00 deg |
| Initial Orientation | Transversal |

Contrast - Common

| | |
|-------------------|----------|
| TR | 3000 ms |
| TE | 60.0 ms |
| MTC | Off |
| Magn. preparation | None |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |

Contrast - Dynamic

| | |
|----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | On |

Resolution - iPAT

| | |
|-------------|--------|
| Accel. mode | GRAPPA |
|-------------|--------|

Geometry - Saturation

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

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 |
| Matrix Optimization | Off |

System - Miscellaneous

| | |
|------------------|----------------------|
| AutoAlign | --- |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 180.00 deg |
| A >> P | 192 mm |
| R >> L | 192 mm |
| F >> H | 124 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 3000 ms |
| Concatenations | 1 |

Physio - PACE

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

Diff - Neuro

| | |
|-----------------------|---------------------|
| Diffusion mode | Slice |
| Diff. directions | 1 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| FA maps | Off |
| Mosaic | Off |
| Tensor | Off |
| Noise level | 40 |

Diff - Body

| | |
|------------------|---------------------|
| Diffusion mode | Slice |
| Diff. directions | 1 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |

Diff - Body

| | |
|-----------------------|---------------------|
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| Exponential ADC Maps | Off |
| FA maps | Off |
| Invert Gray Scale | Off |
| Calculated Image | Off |
| b-Value >= | 0 s/mm ² |
| Noise level | 40 |

Diff - Composing

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

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Optimization | None |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|----------|
| EPI factor | 64 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Standard |

Sequence - pTX Pulses

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\ep2d_fid_basic_bold_p2_rest *

TA: 0:31 PM: REF Voxel size: 3.0×3.0×4.0 mmPAT: 2 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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - iPAT

| | |
|---------------------|--------------|
| Ref. lines PE | 24 |
| Reference scan mode | EPI/separate |

Resolution - Filter Image

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

Resolution - Filter Rawdata

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

Routine

| | |
|--------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 2800 ms |
| TE | 30.0 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | HE1-4 |

Geometry - Common

| | |
|------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| TR | 2800 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Contrast - Common

| | |
|------------|----------|
| TR | 2800 ms |
| TE | 30.0 ms |
| MTC | Off |
| Flip angle | 90 deg |
| Fat suppr. | Fat sat. |

Contrast - Dynamic

| | |
|-----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 8 |
| Delay in TR | 1000 ms |
| Multiple series | Off |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.0 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|------------------|--------|
| Accel. mode | GRAPPA |
| Accel. factor PE | 2 |

Geometry - Saturation

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

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 | Sum of Squares |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| 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 | 192 mm |
| R >> L | 192 mm |
| F >> H | 124 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 2800 ms |
| Concatenations | 1 |

Perf

| | |
|--------------|-----|
| GBP | Off |
| PBP | Off |
| TTP | Off |
| relCBV | Off |
| relCBF | Off |
| relMTT | Off |
| relCBVCorr | Off |
| Measurements | 8 |

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 64 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Excitation | Standard |

Sequence - pTX Pulses

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\cmrr_ep2d_se_ap *

TA: 0:12 PM: REF Voxel size: 3.0×3.0×4.0 mmPAT: 2 Rel. SNR: 1.00 : epse

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------------|-------------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| TR | 3000 ms |
| TE | 60.00 ms |
| Multi-band accel. factor | 1 |
| Filter | Prescan Normalize |
| Coil elements | HE1-4 |

Contrast - Common

| | |
|-----------------------|----------|
| TR | 3000 ms |
| TE | 60.00 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Grad. rev. fat suppr. | Enabled |

Contrast - Dynamic

| | |
|-----------------|-----------|
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|--------|
| PAT mode | GRAPPA |
|----------|--------|

Resolution - iPAT

| | |
|---------------------|-------------|
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Reference scan mode | Single-shot |

Resolution - Filter Image

| | |
|---------------------|-----|
| Distortion Corr. | Off |
| Prescan Normalize | On |
| Dynamic Field Corr. | Off |

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|--------------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| TR | 3000 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Multi-band accel. factor | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

| | |
|-----------------------|----------|
| Fat suppr. | Fat sat. |
| Grad. rev. fat suppr. | Enabled |
| Special sat. | None |

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 | Sum of Squares |
| Matrix Optimization | Off |

System - Miscellaneous

| | |
|------------------|---------|
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| 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 | 192 mm |
| R >> L | 192 mm |
| F >> H | 124 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 3000 ms |
| Multi-band accel. factor | 1 |

Physio - PACE

| | |
|--------------------------|-----|
| Resp. control | Off |
| Multi-band accel. factor | 1 |

Diff - Neuro

| | |
|-----------------------|---------------------|
| Diffusion mode | MDDW |
| Diff. directions | 6 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| FA maps | Off |
| Mosaic | Off |
| Tensor | Off |
| Noise level | 40 |

Diff - Body

| | |
|------------------|---------------------|
| Diffusion mode | MDDW |
| Diff. directions | 6 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |

Diff - Body

| | |
|-----------------------|---------------------|
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| Exponential ADC Maps | Off |
| FA maps | Off |
| Invert Gray Scale | Off |
| Calculated Image | Off |
| b-Value >= | 0 s/mm ² |
| Noise level | 40 |

Diff - Composing

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

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 64 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Excitation | Standard |
| RF spoiling | Off |

Sequence - Special

| | |
|--------------------------|------|
| SENSE1 coil combine | On |
| Invert RO/PE polarity | Off |
| Disable freq. update | Off |
| Force equal slice timing | Off |
| FFT scale factor | 1.00 |
| Physio recording | Off |

| |
|--|
| \\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\cmrr_ep2d_se_apinvrope * |
| TA: 0:12 PM: REF Voxel size: 3.0×3.0×4.0 mmPAT: 2 Rel. SNR: 1.00 : epse |

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - iPAT

| | |
|---------------------|-------------|
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Reference scan mode | Single-shot |

Resolution - Filter Image

| | |
|---------------------|-----|
| Distortion Corr. | Off |
| Prescan Normalize | On |
| Dynamic Field Corr. | Off |

Resolution - Filter Rawdata

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

Routine

| | |
|--------------------------|-------------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| TR | 3000 ms |
| TE | 60.00 ms |
| Multi-band accel. factor | 1 |
| Filter | Prescan Normalize |
| Coil elements | HE1-4 |

Geometry - Common

| | |
|--------------------------|-------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 25 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| TR | 3000 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Multi-band accel. factor | 1 |

Contrast - Common

| | |
|-----------------------|----------|
| TR | 3000 ms |
| TE | 60.00 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Grad. rev. fat suppr. | Enabled |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Contrast - Dynamic

| | |
|-----------------|-----------|
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Geometry - Saturation

| | |
|-----------------------|----------|
| Fat suppr. | Fat sat. |
| Grad. rev. fat suppr. | Enabled |
| Special sat. | None |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 192 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| Base resolution | 64 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Geometry - Navigator**System - Miscellaneous****Resolution - iPAT**

| | |
|----------|--------|
| PAT mode | GRAPPA |
|----------|--------|

| | |
|---------------------|----------------|
| 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 | Sum of Squares |
| Matrix Optimization | Off |

System - Miscellaneous

| | |
|------------------|---------|
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| 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 | 192 mm |
| R >> L | 192 mm |
| F >> H | 124 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 3000 ms |
| Multi-band accel. factor | 1 |

Physio - PACE

| | |
|--------------------------|-----|
| Resp. control | Off |
| Multi-band accel. factor | 1 |

Diff - Neuro

| | |
|-----------------------|---------------------|
| Diffusion mode | MDDW |
| Diff. directions | 6 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| FA maps | Off |
| Mosaic | Off |
| Tensor | Off |
| Noise level | 40 |

Diff - Body

| | |
|------------------|---------------------|
| Diffusion mode | MDDW |
| Diff. directions | 6 |
| Diffusion Scheme | Monopolar |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |

Diff - Body

| | |
|-----------------------|---------------------|
| b-value | 1 |
| Diff. weighted images | On |
| Trace weighted images | Off |
| ADC maps | Off |
| Exponential ADC Maps | Off |
| FA maps | Off |
| Invert Gray Scale | Off |
| Calculated Image | Off |
| b-Value >= | 0 s/mm ² |
| Noise level | 40 |

Diff - Composing

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

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 64 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Excitation | Standard |
| RF spoiling | Off |

Sequence - Special

| | |
|--------------------------|------|
| SENSE1 coil combine | On |
| Invert RO/PE polarity | On |
| Disable freq. update | Off |
| Force equal slice timing | Off |
| FFT scale factor | 1.00 |
| Physio recording | Off |

\\USER\2019_MBC_PROTOCOLS_VE11\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\cmrr_mbep2d_diff *

TA: 0:38 PM: REF Voxel size: 1.1×1.1×4.0 mmPAT: 2 Rel. SNR: 1.00 : epse

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------------|-------------------|
| Slice group | 1 |
| Slices | 27 |
| Dist. factor | 30 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| TR | 3800 ms |
| TE | 81.00 ms |
| Multi-band accel. factor | 1 |
| Filter | Prescan Normalize |
| Coil elements | HE1-4 |

Contrast - Common

| | |
|-----------------------|----------|
| TR | 3800 ms |
| TE | 81.00 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Grad. rev. fat suppr. | Enabled |

Contrast - Dynamic

| | |
|-----------------|-------------|
| Averaging mode | Long term |
| Reconstruction | Magn./Phase |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|--------|
| PAT mode | GRAPPA |
|----------|--------|

Resolution - iPAT

| | |
|---------------------|-------------|
| Accel. factor PE | 2 |
| Ref. lines PE | 40 |
| Reference scan mode | Single-shot |

Resolution - Filter Image

| | |
|---------------------|-----|
| Distortion Corr. | Off |
| Prescan Normalize | On |
| Dynamic Field Corr. | Off |

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|--------------------------|-------------|
| Slice group | 1 |
| Slices | 27 |
| Dist. factor | 30 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| FoV read | 220 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.00 mm |
| TR | 3800 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Multi-band accel. factor | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

| | |
|-----------------------|----------|
| Fat suppr. | Fat sat. |
| Grad. rev. fat suppr. | Enabled |
| Special sat. | None |

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 | Sum of Squares |
| Matrix Optimization | Off |

System - Miscellaneous

| | |
|------------------|---------|
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| 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 | 220 mm |
| R >> L | 220 mm |
| F >> H | 140 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation | Standard |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 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 | 3800 ms |
| Multi-band accel. factor | 1 |

Physio - PACE

| | |
|--------------------------|-----|
| Resp. control | Off |
| Multi-band accel. factor | 1 |

Diff - Neuro

| | |
|-----------------------|------------------------|
| Diffusion mode | MDDW |
| Diff. directions | 6 |
| Diffusion Scheme | Bipolar |
| Diff. weightings | 2 |
| b-value 1 | 0 s/mm ² |
| b-value 2 | 1000 s/mm ² |
| b-value 1 | 1 |
| b-value 2 | 1 |
| Diff. weighted images | On |
| Trace weighted images | On |
| ADC maps | On |
| FA maps | On |
| Mosaic | On |
| Tensor | On |
| Noise level | 40 |

Diff - Body

| | |
|------------------|---------|
| Diffusion mode | MDDW |
| Diff. directions | 6 |
| Diffusion Scheme | Bipolar |

Diff - Body

| | |
|-----------------------|------------------------|
| Diff. weightings | 2 |
| b-value 1 | 0 s/mm ² |
| b-value 2 | 1000 s/mm ² |
| b-value 1 | 1 |
| b-value 2 | 1 |
| Diff. weighted images | On |
| Trace weighted images | On |
| ADC maps | On |
| Exponential ADC Maps | Off |
| FA maps | On |
| Invert Gray Scale | Off |
| Calculated Image | Off |
| b-Value >= | 0 s/mm ² |
| Noise level | 40 |

Diff - Composing

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

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 0.78 ms |
| Bandwidth | 1446 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 192 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Excitation | Standard |
| RF spoiling | Off |

Sequence - Special

| | |
|--------------------------|------|
| SENSE1 coil combine | On |
| Invert RO/PE polarity | Off |
| Force Maxwell corr. | Off |
| PF omits higher k-space | Off |
| Disable freq. update | Off |
| Force equal slice timing | Off |
| FFT scale factor | 1.00 |
| Physio recording | Off |

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\pasl_3d_tra *

TA: 0:20 PM: ISO Voxel size: 1.9×1.9×4.5 mmRel. SNR: 1.00 : tgse

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|---|
| Slab group | 1 |
| Slabs | 1 |
| Dist. factor | 50 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 16 |
| FoV read | 240 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.50 mm |
| TR | 2000 ms |
| TE | 20.26 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Raw filter, Distortion Corr.(2D), Prescan Normalize |
| Coil elements | HE1-4 |

Contrast - Common

| | |
|------------|----------|
| TR | 2000 ms |
| TE | 20.26 ms |
| Flip angle | 180 deg |
| Fat suppr. | Fat sat. |

Contrast - Dynamic

| | |
|-----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 2 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Contrast - ASL

| | |
|----------------------|------------|
| Perfusion mode | FAIR QII |
| Suppression Mode | GRAY-WHITE |
| Bolus Duration | 800 ms |
| Inversion Time | 1000 ms |
| Averaging mode | CONSTANT |
| Inversion Array Size | 1 |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 240 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.50 mm |
| Base resolution | 64 |
| Phase resolution | 97 % |
| Phase partial Fourier | Off |
| Slice partial Fourier | Off |
| Interpolation | On |

Resolution - Filter Image

| | |
|-------------------|----|
| Distortion Corr. | On |
| Mode | 2D |
| Prescan Normalize | On |

Resolution - Filter Rawdata

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

Geometry - Common

| | |
|--------------------|-------------|
| Slab group | 1 |
| Slabs | 1 |
| Dist. factor | 50 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| Slice oversampling | 0.0 % |
| Slices per slab | 16 |
| FoV read | 240 mm |
| FoV phase | 100.0 % |
| Slice thickness | 4.50 mm |
| TR | 2000 ms |
| Multi-slice mode | Interleaved |
| Series | Ascending |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|-------------|
| Slab group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | P >> A |
| AutoAlign | --- |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 180.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

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

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | ISO |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |

System - Miscellaneous

| | |
|---------------------|----------------|
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Off - All |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Standard |
| B1 Shim mode | TrueForm |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | -180.00 deg |
| A >> P | 240 mm |
| R >> L | 240 mm |
| F >> H | 72 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
|--------------|----------|

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ? Ref. amplitude 1H | 0.000 V |

Physio - Signal1

| | |
|-----------------|---------|
| 1st Signal/Mode | None |
| TR | 2000 ms |
| Concatenations | 1 |
| Segments | 2 |

Sequence - Part 1

| | |
|------------------|-------------|
| Introduction | Off |
| Dimension | 3D |
| Reordering | Centric |
| Multi-slice mode | Interleaved |
| Echo spacing | 0.49 ms |
| Bandwidth | 2442 Hz/Px |

Sequence - Part 2

| | |
|---------------|-------------|
| EPI factor | 31 |
| Segments | 2 |
| RF pulse type | Normal |
| Gradient mode | Performance |
| Turbo factor | 16 |

\\USER\2019_MBC_PROTOCOLS_VE11C\SB.2002.60 MR DEVELOPMENT - RS\SB.2002.60 MR DEVELOPMENT - PROTOCOLQC - 110\csi_slaser *

TA: 0:37 PM: REF Voxel size: 20.0×20.0×20.0 mmRel. SNR: 1.00 : csi_slaser

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 | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|------------------|----------------------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0 deg |
| Slices | 1 |
| Vol A >> P | 100 mm |
| Vol R >> L | 80 mm |
| FoV A >> P | 160 mm |
| FoV R >> L | 160 mm |
| Thickness F >> H | 20 mm |
| TR | 1200 ms |
| TE | 50 ms |
| Averages | 1 |
| Filter | Prescan Normalize, Hamming |
| Coil elements | HE1-4 |

Contrast

| | |
|-----------------|-------------------|
| TR | 1200 ms |
| TE | 50 ms |
| Averages | 1 |
| Averaging mode | Long term |
| Flip angle | 65 deg |
| Water suppr. | Weak water suppr. |
| Water suppr. BW | 50 Hz |
| Measurements | 1 |

Resolution - Common

| | |
|-----------------------|--------|
| FoV R >> L | 160 mm |
| FoV A >> P | 160 mm |
| Thickness F >> H | 20 mm |
| Scan res. R >> L | 8 |
| Scan res. A >> P | 8 |
| Interpol. res. R >> L | 8 |
| Interpol. res. A >> P | 8 |
| Hamming | On |
| Width | 50 |
| Prescan Normalize | On |
| Vector size | 256 |

Geometry - Common

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0 deg |
| FoV R >> L | 160 mm |
| FoV A >> P | 160 mm |

Geometry - Common

| | |
|-------------------|--------------------|
| Thickness F >> H | 20 mm |
| Vol R >> L | 80 mm |
| Vol A >> P | 100 mm |
| Sat. region | 1 |
| Thickness | 40 mm |
| Position | L61.0 P0.0 H0.0 mm |
| Orientation | Sagittal |
| Sat. delta frequ. | -3.40 ppm |
| Sat. region | 2 |
| Thickness | 40 mm |
| Position | R61.0 P0.0 H0.0 mm |
| Orientation | Sagittal |
| Sat. delta frequ. | -3.40 ppm |
| Sat. region | 3 |
| Thickness | 40 mm |
| Position | L0.0 P61.0 H0.0 mm |
| Orientation | Coronal |
| Sat. delta frequ. | -3.40 ppm |
| Sat. region | 4 |
| Thickness | 40 mm |
| Position | L0.0 A61.0 H0.0 mm |
| Orientation | Coronal |
| Sat. delta frequ. | -3.40 ppm |

Geometry - AutoAlign

| | |
|---------------------|--------------|
| Slice group | 1 |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | Head > Brain |
| Initial Position | Isocenter |
| L | 0.0 mm |
| P | 0.0 mm |
| H | 0.0 mm |
| Initial Rotation | 90.00 deg |
| Initial Orientation | Transversal |

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 |
| Save uncombined | Off |
| AutoAlign | Head > Brain |
| Coil Select Mode | Off - All |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Adj. water suppr. | On |
| Adjust with body coil | Off |
| Confirm freq. adjustment | On |
| Only after freq. change | On |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 90.00 deg |
| R >> L | 80 mm |
| A >> P | 100 mm |
| F >> H | 20 mm |
| Reset | Off |

System - pTx Volumes

| | |
|--------------|----------|
| B1 Shim mode | TrueForm |
|--------------|----------|

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 123.237846 MHz |
| Correction factor | 1.731 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ? Ref. amplitude 1H | 0.000 V |

Sequence - Common

| | |
|----------------------|-----------|
| Preparation scans | 2 |
| Dimension | 2D |
| Delta frequency | -2.70 ppm |
| Phase encoding | Weighted |
| Bandwidth | 2000 Hz |
| Acquisition duration | 128 ms |
| Remove oversampling | Off |