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\\NEURO

Neuro Clinical BGR3

Spine1

Trauma T-L Spn

|                             |    |       |      |        |   |
|-----------------------------|----|-------|------|--------|---|
| localizer                   |    |       |      |        | * |
| Sag                         |    |       | stir |        | * |
| Sag                         | t1 |       |      | flair  | * |
| Sag                         |    |       | t2   |        | * |
| Ax                          |    |       | t2   |        | * |
| Cor                         |    |       | stir |        | * |
| Ax                          | t1 | flair |      | lumbar | * |
| t2_me2d_tra_for             |    | cord  |      | injury | * |
| Cor                         |    | t2    |      |        | * |
| localizer                   |    |       |      |        | * |
| Sag                         |    |       | stir |        | * |
| Sag                         | t1 |       |      | flair  | * |
| Sag                         |    |       | t2   |        | * |
| Ax                          |    |       | t2   |        | * |
| Cor                         |    |       | stir |        | * |
| Ax                          | t1 | flair |      | lumbar | * |
| t2_me2d_tra_p2              |    | for   | cord | injury | * |
| Cor                         |    | t2    |      |        | * |
| localizer                   |    |       |      |        | * |
| t2_stir_sag_p2              |    |       |      |        | * |
| t1_tse_dark-fluid_sag_24    |    |       |      |        | * |
| t2_tse_sag_384              |    |       |      |        | * |
| t2_tse_tra_448              |    |       |      |        | * |
| t2_tse_tra_448_under        |    |       |      | 2yrs   | * |
| t2_stir_cor_p2              |    |       |      |        | * |
| t1_tse_dark-fluid_tra       |    |       |      |        | * |
| t1_tse_dark-fluid_tra_under |    |       |      | 2yrs   | * |
| t2_me2d_tra_p2              |    | or    | cord | injury | * |
| t2_tse_cor_384              |    |       |      |        | * |

## \\NEURO\\Neuro Clinical BGR3\\Spine1\\Trauma T-L Spn\\localizer \*

TA: 21 sec Coil Selection: Auto Voxel Size: 0.6×0.6×6.0 mm<sup>3</sup> Acc.: None Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Phase Oversampling  | 38 %               |
| FOV Read            | 300 mm             |
| FOV Phase           | 100.0 %            |
| Slice Thickness     | 6.0 mm             |
| TR                  | 7.8 ms             |
| TE                  | 3.69 ms            |
| Averages            | 1                  |
| Concatenations      | 9                  |
| AutoAlign           | ---                |

**Contrast - Common**

|                   |         |
|-------------------|---------|
| TR                | 7.8 ms  |
| TE                | 3.69 ms |
| TD                | 0.00 ms |
| MTC               | Off     |
| Magn. Preparation | None    |
| Flip Angle        | 20 deg  |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| SWI                | Off       |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 300 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 6.0 mm  |
| Base Resolution  | 256     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                       |      |
|-----------------------|------|
| Acceleration Mode     | None |
| Deep Resolve          | Off  |
| Phase Partial Fourier | Off  |
| Asymmetric Echo       | Off  |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Orientation         | Coronal     |
| Phase Encoding Dir. | R >> L      |
| Phase Oversampling  | 38 %        |
| FOV Read            | 300 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 6.0 mm      |
| TR                  | 7.8 ms      |
| Multi-Slice Mode    | Sequential  |
| Series              | Interleaved |
| Concatenations      | 9           |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| AutoAlign           | ---                |
| Initial Position    | L18.0 P20.0 H0.0   |
| L                   | 18.0 mm            |
| P                   | 20.0 mm            |
| H                   | 0.0 mm             |
| Initial Orientation | Transversal        |
| Initial Rotation    | 0.00 deg           |

**Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |            |
|--------------|------------|
| B1 Shim      | TrueForm   |
| Excitation   | Slice-sel. |
| LR Balancing | Off        |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |        |
|-----------------|--------|
| 1st Signal/Mode | None   |
| TR              | 7.8 ms |
| Segments        | 1      |
| Concatenations  | 9      |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Tagging            | None     |
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 300 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 80 %     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 9   |

**Inline - Liver**

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

**Inline - Subtraction**

|          |     |
|----------|-----|
| Subtract | Off |
|----------|-----|

**Inline - Subtraction**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

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

**Inline - MapIt**

|                      |         |
|----------------------|---------|
| MapIt                | None    |
| Flip Angle           | 20 deg  |
| Measurements         | 1       |
| Contrasts            | 1       |
| TE                   | 3.69 ms |
| TR                   | 7.8 ms  |
| Save Original Images | On      |

**Sequence - Part 1**

|                   |            |
|-------------------|------------|
| Sequence Name     | fl         |
| Dimension         | 2D         |
| Excitation        | Slice-sel. |
| RF Pulse Type     | Normal     |
| Gradient Mode     | Normal     |
| Flow Compensation | None       |
| Bandwidth         | 320 Hz/Px  |
| Asymmetric Echo   | Off        |
| Segments          | 1          |

**Sequence - Part 2**

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

**Sequence - Assistant**

|               |     |
|---------------|-----|
| SAR Assistant | Off |
| Allowed Delay | 0 s |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Sag stir \*

TA: 3:11 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00

## Properties

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

## Routine

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 10 %             |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | A >> P           |
| Phase Oversampling  | 100 %            |
| FOV Read            | 200 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 3500.0 ms        |
| TE                  | 57.00 ms         |
| Averages            | 2                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

## Contrast - Common

|                      |               |
|----------------------|---------------|
| TR                   | 3500.0 ms     |
| TE                   | 57.00 ms      |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 220 ms        |
| Freeze Suppr. Tissue | Off           |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 155 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

## Contrast - Dynamic

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

## Contrast - Dynamic

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

## Resolution - Common

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

## Resolution - Acceleration

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 35         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

## Resolution - Filter

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

## Geometry - Common

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Sagittal    |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 200 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 3500.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

## Geometry - AutoAlign

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | A >> P           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |

**Geometry - AutoAlign**

|                     |          |
|---------------------|----------|
| H                   | 0.0 mm   |
| Initial Orientation | Sagittal |
| Initial Rotation    | 0.00 deg |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 35.00 mm           |
| Position           | L0.0 A50.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 3500.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 220 ms        |
| Dark Blood         | Off           |
| FOV Read           | 200 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 80 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | tir_rr    |
| Dimension         | 2D        |
| RF Pulse Type     | Fast      |
| Gradient Mode     | Fast      |
| Flow Compensation | Read      |
| Bandwidth         | 252 Hz/Px |
| Echo Spacing      | 8.17 ms   |
| Free Echo Spacing | Off       |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Define                | Turbo Factor |
| Turbo Factor          | 15           |
| Echo Trains per Slice | 13           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Sag t1 flair \*

TA: 1:57 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 10 %             |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | H >> F           |
| Phase Oversampling  | 140 %            |
| FOV Read            | 200 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 1800.0 ms        |
| TE                  | 19.00 ms         |
| Averages            | 1                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

**Contrast - Common**

|                      |               |
|----------------------|---------------|
| TR                   | 1800.0 ms     |
| TE                   | 19.00 ms      |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 817 ms        |
| Freeze Suppr. Tissue | On            |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 160 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

**Contrast - Dynamic**

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

**Contrast - Dynamic**

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                        |              |
|------------------------|--------------|
| Acceleration Mode      | GRAPPA       |
| Reference Scans        | TSE/Separate |
| Acceleration Factor PE | 3            |
| Reference Lines PE     | 32           |
| Deep Resolve           | On           |
| Phase Partial Fourier  | Off          |

**Resolution - Filter**

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

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Sagittal    |
| Phase Encoding Dir. | H >> F      |
| Phase Oversampling  | 140 %       |
| FOV Read            | 200 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 1800.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

**Geometry - AutoAlign**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | H >> F           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |

**Geometry - AutoAlign**

|                     |           |
|---------------------|-----------|
| H                   | 0.0 mm    |
| Initial Orientation | Sagittal  |
| Initial Rotation    | 90.00 deg |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 35.00 mm           |
| Position           | L0.0 A50.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 1800.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 817 ms        |
| Dark Blood         | Off           |
| FOV Read           | 200 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 80 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | tir       |
| Dimension         | 2D        |
| RF Pulse Type     | Normal    |
| Gradient Mode     | Fast      |
| Flow Compensation | None      |
| Bandwidth         | 220 Hz/Px |
| Echo Spacing      | 9.64 ms   |
| Free Echo Spacing | Off       |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Define                | Turbo Factor |
| Turbo Factor          | 7            |
| Echo Trains per Slice | 30           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |                 |
|----------------|-----------------|
| SAR Assistant  | Flip Angle > TR |
| Min Flip Angle | 140 deg         |
| Max. TR        | 2000.0 ms       |
| Allowed Delay  | 60 s            |

## \\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Sag t2 \*

TA: 2:08 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 384     |
| Phase Resolution | 75 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 57         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

**Routine**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 10 %             |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | A >> P           |
| Phase Oversampling  | 100 %            |
| FOV Read            | 200 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 3000.0 ms        |
| TE                  | 101.00 ms        |
| Averages            | 2                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

**Resolution - Filter**

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

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Sagittal    |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 200 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 3000.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 3000.0 ms |
| TE                 | 101.00 ms |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | Restore   |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Geometry - AutoAlign**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | A >> P           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |
| H                   | 0.0 mm           |
| Initial Orientation | Sagittal         |
| Initial Rotation    | 0.00 deg         |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 35.00 mm           |
| Position           | L0.0 A50.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 3000.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 200 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 75 %     |
| Motion Correction  | None     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tseR_rr      |
| Dimension             | 2D           |
| RF Pulse Type         | Fast         |
| Gradient Mode         | Fast         |
| Flow Compensation     | Read         |
| Bandwidth             | 260 Hz/Px    |
| Echo Spacing          | 8.39 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 23           |
| Echo Trains per Slice | 10           |

**Sequence - Part 2**

|                  |           |
|------------------|-----------|
| Introduction     | On        |
| Phase Correction | Automatic |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Compensate T2 Decay      | Off  |
| Fast Mode                | Off  |
| WARP                     | Off  |
| Red. EC Sensitivity      | Off  |
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|               |           |
|---------------|-----------|
| SAR Assistant | TR        |
| Max. TR       | 4500.0 ms |
| Allowed Delay | 60 s      |

## \\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Ax t2 \*

TA: 3:40 min Coil Selection: Auto Voxel Size: 0.3×0.3×4.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 180 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 4.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 35         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

**Routine**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 40               |
| Distance Factor     | 10 %             |
| Position            | Isocenter        |
| Orientation         | Transversal      |
| Phase Encoding Dir. | A >> P           |
| Phase Oversampling  | 100 %            |
| FOV Read            | 180 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 4.0 mm           |
| TR                  | 4050.0 ms        |
| TE                  | 95.00 ms         |
| Averages            | 2                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

**Resolution - Filter**

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

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 40          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 180 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 4.0 mm      |
| TR                  | 4050.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 4050.0 ms |
| TE                 | 95.00 ms  |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | Restore   |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Geometry - AutoAlign**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Transversal      |
| Phase Encoding Dir. | A >> P           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | L0.0 P0.0 H55.0  |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |
| H                   | 55.0 mm          |
| Initial Orientation | Transversal      |
| Initial Rotation    | 0.40 deg         |

**Geometry - Navigator****Geometry - Saturation**

|                    |           |
|--------------------|-----------|
| Saturation Region  | 1         |
| Thickness          | 40.00 mm  |
| Position           | Isocenter |
| Orientation        | Sagittal  |
| Shape              | Standard  |
| Special Saturation | None      |

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 55 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 4050.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 180 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 80 %     |
| Motion Correction  | None     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tseR_rs      |
| Dimension             | 2D           |
| RF Pulse Type         | Normal       |
| Gradient Mode         | Fast         |
| Flow Compensation     | Slice        |
| Bandwidth             | 252 Hz/Px    |
| Echo Spacing          | 11.9 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 15           |
| Echo Trains per Slice | 13           |

**Sequence - Part 2**

|                  |           |
|------------------|-----------|
| Introduction     | On        |
| Phase Correction | Automatic |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Compensate T2 Decay      | Off  |
| Fast Mode                | Off  |
| WARP                     | Off  |
| Red. EC Sensitivity      | Off  |
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 30 s       |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Cor stir \*

TA: 1:50 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 304     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 33         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

**Routine**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 17 %             |
| Position            | Isocenter        |
| Orientation         | Coronal          |
| Phase Encoding Dir. | R >> L           |
| Phase Oversampling  | 150 %            |
| FOV Read            | 200 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 3500.0 ms        |
| TE                  | 56.00 ms         |
| Averages            | 2                |
| Concatenations      | 1                |
| AutoAlign           | Spine > Cervical |

**Resolution - Filter**

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

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 17 %        |
| Position            | Isocenter   |
| Orientation         | Coronal     |
| Phase Encoding Dir. | R >> L      |
| Phase Oversampling  | 150 %       |
| FOV Read            | 200 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 3500.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 1           |

**Contrast - Common**

|                      |               |
|----------------------|---------------|
| TR                   | 3500.0 ms     |
| TE                   | 56.00 ms      |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 210 ms        |
| Freeze Suppr. Tissue | Off           |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 155 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

**Geometry - AutoAlign**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Coronal          |
| Phase Encoding Dir. | R >> L           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |
| H                   | 0.0 mm           |
| Initial Orientation | Coronal          |
| Initial Rotation    | 0.00 deg         |

**Contrast - Dynamic**

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

**Geometry - Navigator****Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 3500.0 ms |
| Concatenations  | 1         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 210 ms        |
| Dark Blood         | Off           |
| FOV Read           | 200 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 80 %          |
| Motion Correction  | None          |

**Physio - PACE**

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

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tir_rr       |
| Dimension             | 2D           |
| RF Pulse Type         | Fast         |
| Gradient Mode         | Fast         |
| Flow Compensation     | Read         |
| Bandwidth             | 253 Hz/Px    |
| Echo Spacing          | 8.07 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 15           |
| Echo Trains per Slice | 15           |

**Sequence - Part 2**

|                     |           |
|---------------------|-----------|
| Introduction        | On        |
| Phase Correction    | Automatic |
| Compensate T2 Decay | Off       |
| Fast Mode           | Off       |
| WARP                | Off       |
| Red. EC Sensitivity | Off       |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Ax t1 flair lumbar \*

TA: 3:02 min Coil Selection: Auto Voxel Size: 0.4x0.4x4.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00

## Properties

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

## Routine

|                     |                |
|---------------------|----------------|
| Slice Group         | 1              |
| Slices              | 40             |
| Distance Factor     | 10 %           |
| Position            | Isocenter      |
| Orientation         | Transversal    |
| Phase Encoding Dir. | A >> P         |
| Phase Oversampling  | 100 %          |
| FOV Read            | 200 mm         |
| FOV Phase           | 100.0 %        |
| Slice Thickness     | 4.0 mm         |
| TR                  | 2000.0 ms      |
| TE                  | 18.00 ms       |
| Averages            | 1              |
| Concatenations      | 3              |
| AutoAlign           | Spine > Lumbar |

## Contrast - Common

|                      |               |
|----------------------|---------------|
| TR                   | 2000.0 ms     |
| TE                   | 18.00 ms      |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 804 ms        |
| Freeze Suppr. Tissue | On            |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 130 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

## Contrast - Dynamic

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

## Contrast - Dynamic

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

## Resolution - Common

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 4.0 mm  |
| Base Resolution  | 256     |
| Phase Resolution | 75 %    |
| Interpolation    | On      |

## Resolution - Acceleration

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 26         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

## Resolution - Filter

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

## Geometry - Common

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 40          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 200 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 4.0 mm      |
| TR                  | 2000.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 3           |

## Geometry - AutoAlign

|                     |                 |
|---------------------|-----------------|
| Slice Group         | 1               |
| Position            | Isocenter       |
| Orientation         | Transversal     |
| Phase Encoding Dir. | A >> P          |
| AutoAlign           | Spine > Lumbar  |
| Initial Position    | L0.0 P0.0 H60.0 |
| L                   | 0.0 mm          |
| P                   | 0.0 mm          |

**Geometry - AutoAlign**

|                     |             |
|---------------------|-------------|
| H                   | 60.0 mm     |
| Initial Orientation | Transversal |
| Initial Rotation    | 0.40 deg    |

**Geometry - Navigator****Geometry - Saturation**

|                    |                     |
|--------------------|---------------------|
| Saturation Region  | 1                   |
| Thickness          | 35.00 mm            |
| Position           | L0.0 A40.0 H60.0 mm |
| Orientation        | Coronal             |
| Shape              | Standard            |
| Special Saturation | None                |

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 60 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Standard |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

|             |             |
|-------------|-------------|
| Position    | Isocenter   |
| Orientation | Transversal |
| Rotation    | 0.40 deg    |
| A >> P      | 200 mm      |
| R >> L      | 200 mm      |
| F >> H      | 176 mm      |
| Reset       | Off         |

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 2000.0 ms |
| Concatenations  | 3         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 804 ms        |
| Dark Blood         | Off           |
| FOV Read           | 200 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 75 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 3   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | tir       |
| Dimension         | 2D        |
| RF Pulse Type     | Normal    |
| Gradient Mode     | Fast      |
| Flow Compensation | None      |
| Bandwidth         | 233 Hz/Px |
| Echo Spacing      | 9.06 ms   |
| Free Echo Spacing | Off       |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Define                | Turbo Factor |
| Turbo Factor          | 5            |
| Echo Trains per Slice | 29           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |                 |
|----------------|-----------------|
| SAR Assistant  | TR > Flip Angle |
| Min Flip Angle | 130 deg         |
| Max. TR        | 2000.0 ms       |
| Allowed Delay  | 60 s            |

## \\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\t2\_me2d\_tra\_for cord injury \*

TA: 3:20 min Coil Selection: Auto Voxel Size: 0.4×0.4×4.0 mm<sup>3</sup> Acc:: 2 Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 38                  |
| Distance Factor     | 10 %                |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| Phase Oversampling  | 40 %                |
| FOV Read            | 180 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 4.0 mm              |
| TR                  | 641.0 ms            |
| TE                  | 14.00 ms            |
| Averages            | 1                   |
| Concatenations      | 2                   |
| AutoAlign           | Spine > Cervical    |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 641.0 ms  |
| TE                 | 14.00 ms  |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Flip Angle         | 30 deg    |
| Fat-Water Contrast | Standard  |
| Combined Echoes    | 4         |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

|                 |          |
|-----------------|----------|
| Dynamic Mode    | Standard |
| Measurements    | 1        |
| Multiple Series | Off      |

**Resolution - Common**

|           |         |
|-----------|---------|
| FOV Read  | 180 mm  |
| FOV Phase | 100.0 % |

**Resolution - Common**

|                  |        |
|------------------|--------|
| Slice Thickness  | 4.0 mm |
| Base Resolution  | 256    |
| Phase Resolution | 80 %   |
| Interpolation    | On     |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 2          |
| Reference Lines PE     | 24         |
| Phase Partial Fourier  | Off        |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 38                  |
| Distance Factor     | 10 %                |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| Phase Oversampling  | 40 %                |
| FOV Read            | 180 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 4.0 mm              |
| TR                  | 641.0 ms            |
| Multi-Slice Mode    | Interleaved         |
| Series              | Interleaved         |
| Concatenations      | 2                   |

**Geometry - AutoAlign**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| AutoAlign           | Spine > Cervical    |
| Initial Position    | L7.9 P15.4 H24.4    |
| L                   | 7.9 mm              |
| P                   | 15.4 mm             |
| H                   | 24.4 mm             |
| Initial Orientation | T > C               |
| T > C               | 8.00                |
| > S                 | 0.00                |
| Initial Rotation    | 0.00 deg            |

**Geometry - Saturation**

|                    |                     |
|--------------------|---------------------|
| Saturation Region  | 1                   |
| Thickness          | 80.00 mm            |
| Position           | L0.0 A51.0 F17.1 mm |
| Orientation        | C > T-18.5          |
| Special Saturation | None                |

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 24 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Standard |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

|             |                     |
|-------------|---------------------|
| Position    | L7.9 P15.4 H24.4 mm |
| Orientation | T > C8.0            |
| Rotation    | 0.00 deg            |
| A >> P      | 180 mm              |
| R >> L      | 180 mm              |
| F >> H      | 167 mm              |
| Reset       | Off                 |

**System - pTx**

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

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |          |
|-----------------|----------|
| 1st Signal/Mode | None     |
| TR              | 641.0 ms |

**Physio - Signal**

|                |   |
|----------------|---|
| Concatenations | 2 |
|----------------|---|

**Inline - Subtraction**

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

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | me_r      |
| Dimension         | 2D        |
| RF Pulse Type     | Normal    |
| Gradient Mode     | Fast      |
| Flow Compensation | On        |
| Bandwidth         | 260 Hz/Px |

**Sequence - Part 2**

|              |    |
|--------------|----|
| Introduction | On |
| RF Spoiling  | On |

**Sequence - Assistant**

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

## \\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Cor t2 \*

TA: 2:08 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 384     |
| Phase Resolution | 75 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 57         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

**Routine**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 10 %             |
| Position            | Isocenter        |
| Orientation         | Coronal          |
| Phase Encoding Dir. | R >> L           |
| Phase Oversampling  | 100 %            |
| FOV Read            | 200 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 3000.0 ms        |
| TE                  | 101.00 ms        |
| Averages            | 2                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

**Resolution - Filter**

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

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Coronal     |
| Phase Encoding Dir. | R >> L      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 200 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 3000.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 3000.0 ms |
| TE                 | 101.00 ms |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | Restore   |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Geometry - AutoAlign**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Coronal          |
| Phase Encoding Dir. | R >> L           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |
| H                   | 0.0 mm           |
| Initial Orientation | Coronal          |
| Initial Rotation    | 0.00 deg         |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 35.00 mm           |
| Position           | L0.0 A50.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 3000.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 200 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 75 %     |
| Motion Correction  | None     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tseR_rr      |
| Dimension             | 2D           |
| RF Pulse Type         | Fast         |
| Gradient Mode         | Fast         |
| Flow Compensation     | Read         |
| Bandwidth             | 260 Hz/Px    |
| Echo Spacing          | 8.39 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 23           |
| Echo Trains per Slice | 10           |

**Sequence - Part 2**

|                  |           |
|------------------|-----------|
| Introduction     | On        |
| Phase Correction | Automatic |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Compensate T2 Decay      | Off  |
| Fast Mode                | Off  |
| WARP                     | Off  |
| Red. EC Sensitivity      | Off  |
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|               |           |
|---------------|-----------|
| SAR Assistant | TR        |
| Max. TR       | 4500.0 ms |
| Allowed Delay | 60 s      |

## \\NEURO\\Neuro Clinical BGR3\\Spine1\\Trauma T-L Spn\\localizer \*

TA: 26 sec Coil Selection: Auto Voxel Size: 0.6×0.6×6.0 mm<sup>3</sup> Acc.: None Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Phase Oversampling  | 38 %               |
| FOV Read            | 300 mm             |
| FOV Phase           | 100.0 %            |
| Slice Thickness     | 6.0 mm             |
| TR                  | 7.8 ms             |
| TE                  | 3.69 ms            |
| Averages            | 1                  |
| Concatenations      | 11                 |
| AutoAlign           | ---                |

**Contrast - Common**

|                   |         |
|-------------------|---------|
| TR                | 7.8 ms  |
| TE                | 3.69 ms |
| TD                | 0.00 ms |
| MTC               | Off     |
| Magn. Preparation | None    |
| Flip Angle        | 20 deg  |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| SWI                | Off       |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 300 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 6.0 mm  |
| Base Resolution  | 256     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                       |      |
|-----------------------|------|
| Acceleration Mode     | None |
| Deep Resolve          | Off  |
| Phase Partial Fourier | Off  |
| Asymmetric Echo       | Off  |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Orientation         | Coronal     |
| Phase Encoding Dir. | R >> L      |
| Phase Oversampling  | 38 %        |
| FOV Read            | 300 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 6.0 mm      |
| TR                  | 7.8 ms      |
| Multi-Slice Mode    | Sequential  |
| Series              | Interleaved |
| Concatenations      | 11          |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| AutoAlign           | ---                |
| Initial Position    | L0.0 P92.0 H0.0    |
| L                   | 0.0 mm             |
| P                   | 92.0 mm            |
| H                   | 0.0 mm             |
| Initial Orientation | Transversal        |
| Initial Rotation    | 0.00 deg           |

**Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |            |
|--------------|------------|
| B1 Shim      | TrueForm   |
| Excitation   | Slice-sel. |
| LR Balancing | Off        |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |        |
|-----------------|--------|
| 1st Signal/Mode | None   |
| TR              | 7.8 ms |
| Segments        | 1      |
| Concatenations  | 11     |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Tagging            | None     |
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 300 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 80 %     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 11  |

**Inline - Liver**

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

**Inline - Subtraction**

|          |     |
|----------|-----|
| Subtract | Off |
|----------|-----|

**Inline - Subtraction**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

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

**Inline - MapIt**

|                      |         |
|----------------------|---------|
| MapIt                | None    |
| Flip Angle           | 20 deg  |
| Measurements         | 1       |
| Contrasts            | 1       |
| TE                   | 3.69 ms |
| TR                   | 7.8 ms  |
| Save Original Images | On      |

**Sequence - Part 1**

|                   |            |
|-------------------|------------|
| Sequence Name     | fl         |
| Dimension         | 2D         |
| Excitation        | Slice-sel. |
| RF Pulse Type     | Normal     |
| Gradient Mode     | Normal     |
| Flow Compensation | None       |
| Bandwidth         | 320 Hz/Px  |
| Asymmetric Echo   | Off        |
| Segments          | 1          |

**Sequence - Part 2**

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

**Sequence - Assistant**

|               |     |
|---------------|-----|
| SAR Assistant | Off |
| Allowed Delay | 0 s |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Sag stir \*

TA: 3:11 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00

## Properties

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

## Routine

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 20 %             |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | A >> P           |
| Phase Oversampling  | 100 %            |
| FOV Read            | 180 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 3500.0 ms        |
| TE                  | 57.00 ms         |
| Averages            | 2                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

## Contrast - Common

|                      |               |
|----------------------|---------------|
| TR                   | 3500.0 ms     |
| TE                   | 57.00 ms      |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 220 ms        |
| Freeze Suppr. Tissue | Off           |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 155 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

## Contrast - Dynamic

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

## Contrast - Dynamic

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

## Resolution - Common

|                  |         |
|------------------|---------|
| FOV Read         | 180 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 288     |
| Phase Resolution | 89 %    |
| Interpolation    | On      |

## Resolution - Acceleration

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 35         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

## Resolution - Filter

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

## Geometry - Common

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 20 %        |
| Position            | Isocenter   |
| Orientation         | Sagittal    |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 180 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 3500.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

## Geometry - AutoAlign

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | A >> P           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |

**Geometry - AutoAlign**

|                     |          |
|---------------------|----------|
| H                   | 0.0 mm   |
| Initial Orientation | Sagittal |
| Initial Rotation    | 0.00 deg |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 35.00 mm           |
| Position           | L0.0 A50.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 3500.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 220 ms        |
| Dark Blood         | Off           |
| FOV Read           | 180 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 89 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | tir_rr    |
| Dimension         | 2D        |
| RF Pulse Type     | Fast      |
| Gradient Mode     | Fast      |
| Flow Compensation | Read      |
| Bandwidth         | 252 Hz/Px |
| Echo Spacing      | 8.13 ms   |
| Free Echo Spacing | Off       |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Define                | Turbo Factor |
| Turbo Factor          | 15           |
| Echo Trains per Slice | 13           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Sag t1 flair \*

TA: 1:46 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00

## Properties

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

## Routine

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 10 %             |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | H >> F           |
| Phase Oversampling  | 140 %            |
| FOV Read            | 180 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 1800.0 ms        |
| TE                  | 19.00 ms         |
| Averages            | 1                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

## Contrast - Common

|                      |               |
|----------------------|---------------|
| TR                   | 1800.0 ms     |
| TE                   | 19.00 ms      |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 817 ms        |
| Freeze Suppr. Tissue | On            |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 160 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

## Contrast - Dynamic

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

## Contrast - Dynamic

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

## Resolution - Common

|                  |         |
|------------------|---------|
| FOV Read         | 180 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 288     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

## Resolution - Acceleration

|                        |              |
|------------------------|--------------|
| Acceleration Mode      | GRAPPA       |
| Reference Scans        | TSE/Separate |
| Acceleration Factor PE | 3            |
| Reference Lines PE     | 32           |
| Deep Resolve           | On           |
| Phase Partial Fourier  | Off          |

## Resolution - Filter

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

## Geometry - Common

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Sagittal    |
| Phase Encoding Dir. | H >> F      |
| Phase Oversampling  | 140 %       |
| FOV Read            | 180 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 1800.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

## Geometry - AutoAlign

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | H >> F           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |

**Geometry - AutoAlign**

|                     |           |
|---------------------|-----------|
| H                   | 0.0 mm    |
| Initial Orientation | Sagittal  |
| Initial Rotation    | 90.00 deg |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 35.00 mm           |
| Position           | L0.0 A50.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 1800.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 817 ms        |
| Dark Blood         | Off           |
| FOV Read           | 180 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 80 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | tir       |
| Dimension         | 2D        |
| RF Pulse Type     | Normal    |
| Gradient Mode     | Fast      |
| Flow Compensation | None      |
| Bandwidth         | 220 Hz/Px |
| Echo Spacing      | 9.48 ms   |
| Free Echo Spacing | Off       |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Define                | Turbo Factor |
| Turbo Factor          | 7            |
| Echo Trains per Slice | 27           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |                 |
|----------------|-----------------|
| SAR Assistant  | Flip Angle > TR |
| Min Flip Angle | 140 deg         |
| Max. TR        | 2000.0 ms       |
| Allowed Delay  | 60 s            |

## \\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Sag t2 \*

TA: 1:56 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 180 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 304     |
| Phase Resolution | 85 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 51         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

**Routine**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 20 %             |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | A >> P           |
| Phase Oversampling  | 100 %            |
| FOV Read            | 180 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 3000.0 ms        |
| TE                  | 97.00 ms         |
| Averages            | 2                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

**Resolution - Filter**

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

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 20 %        |
| Position            | Isocenter   |
| Orientation         | Sagittal    |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 180 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 3000.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 3000.0 ms |
| TE                 | 97.00 ms  |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | Restore   |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Geometry - AutoAlign**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Sagittal         |
| Phase Encoding Dir. | A >> P           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |
| H                   | 0.0 mm           |
| Initial Orientation | Sagittal         |
| Initial Rotation    | 0.00 deg         |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 35.00 mm           |
| Position           | L0.0 A50.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 3000.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 180 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 85 %     |
| Motion Correction  | None     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tseR_rr      |
| Dimension             | 2D           |
| RF Pulse Type         | Fast         |
| Gradient Mode         | Fast         |
| Flow Compensation     | Read         |
| Bandwidth             | 261 Hz/Px    |
| Echo Spacing          | 8.11 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 23           |
| Echo Trains per Slice | 9            |

**Sequence - Part 2**

|                  |           |
|------------------|-----------|
| Introduction     | On        |
| Phase Correction | Automatic |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Compensate T2 Decay      | Off  |
| Fast Mode                | Off  |
| WARP                     | Off  |
| Red. EC Sensitivity      | Off  |
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|               |           |
|---------------|-----------|
| SAR Assistant | TR        |
| Max. TR       | 4500.0 ms |
| Allowed Delay | 60 s      |

## \\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Ax t2 \*

TA: 3:40 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 180 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 35         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

**Routine**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 40               |
| Distance Factor     | 10 %             |
| Position            | Isocenter        |
| Orientation         | Transversal      |
| Phase Encoding Dir. | A >> P           |
| Phase Oversampling  | 100 %            |
| FOV Read            | 180 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 4050.0 ms        |
| TE                  | 85.00 ms         |
| Averages            | 2                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

**Resolution - Filter**

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

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 40          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 180 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 4050.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 4050.0 ms |
| TE                 | 85.00 ms  |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | Restore   |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Geometry - AutoAlign**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Transversal      |
| Phase Encoding Dir. | A >> P           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | L0.0 P0.0 H55.0  |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |
| H                   | 55.0 mm          |
| Initial Orientation | Transversal      |
| Initial Rotation    | 0.40 deg         |

**Geometry - Navigator****Geometry - Saturation**

|                    |           |
|--------------------|-----------|
| Saturation Region  | 1         |
| Thickness          | 40.00 mm  |
| Position           | Isocenter |
| Orientation        | Sagittal  |
| Shape              | Standard  |
| Special Saturation | None      |

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 55 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 4050.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 180 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 80 %     |
| Motion Correction  | None     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tseR_rs      |
| Dimension             | 2D           |
| RF Pulse Type         | Normal       |
| Gradient Mode         | Fast         |
| Flow Compensation     | Slice        |
| Bandwidth             | 252 Hz/Px    |
| Echo Spacing          | 10.7 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 15           |
| Echo Trains per Slice | 13           |

**Sequence - Part 2**

|                  |           |
|------------------|-----------|
| Introduction     | On        |
| Phase Correction | Automatic |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Compensate T2 Decay      | Off  |
| Fast Mode                | Off  |
| WARP                     | Off  |
| Red. EC Sensitivity      | Off  |
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 30 s       |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Cor stir \*

TA: 1:50 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00

## Properties

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

## Resolution - Common

|                  |         |
|------------------|---------|
| FOV Read         | 180 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 304     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

## Resolution - Acceleration

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 33         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

## Routine

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 17 %             |
| Position            | Isocenter        |
| Orientation         | Coronal          |
| Phase Encoding Dir. | R >> L           |
| Phase Oversampling  | 150 %            |
| FOV Read            | 180 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 3500.0 ms        |
| TE                  | 58.00 ms         |
| Averages            | 2                |
| Concatenations      | 1                |
| AutoAlign           | Spine > Cervical |

## Resolution - Filter

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

## Geometry - Common

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 17 %        |
| Position            | Isocenter   |
| Orientation         | Coronal     |
| Phase Encoding Dir. | R >> L      |
| Phase Oversampling  | 150 %       |
| FOV Read            | 180 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 3500.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 1           |

## Contrast - Common

|                      |               |
|----------------------|---------------|
| TR                   | 3500.0 ms     |
| TE                   | 58.00 ms      |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 210 ms        |
| Freeze Suppr. Tissue | Off           |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 155 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

## Geometry - AutoAlign

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Coronal          |
| Phase Encoding Dir. | R >> L           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |
| H                   | 0.0 mm           |
| Initial Orientation | Coronal          |
| Initial Rotation    | 0.00 deg         |

## Contrast - Dynamic

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

**Geometry - Navigator****Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 3500.0 ms |
| Concatenations  | 1         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 210 ms        |
| Dark Blood         | Off           |
| FOV Read           | 180 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 80 %          |
| Motion Correction  | None          |

**Physio - PACE**

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

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tir_rr       |
| Dimension             | 2D           |
| RF Pulse Type         | Fast         |
| Gradient Mode         | Fast         |
| Flow Compensation     | Read         |
| Bandwidth             | 253 Hz/Px    |
| Echo Spacing          | 8.23 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 15           |
| Echo Trains per Slice | 15           |

**Sequence - Part 2**

|                     |           |
|---------------------|-----------|
| Introduction        | On        |
| Phase Correction    | Automatic |
| Compensate T2 Decay | Off       |
| Fast Mode           | Off       |
| WARP                | Off       |
| Red. EC Sensitivity | Off       |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Ax t1 flair lumbar \*

TA: 3:02 min Coil Selection: Auto Voxel Size: 0.4x0.4x4.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00

## Properties

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

## Routine

|                     |                |
|---------------------|----------------|
| Slice Group         | 1              |
| Slices              | 40             |
| Distance Factor     | 10 %           |
| Position            | Isocenter      |
| Orientation         | Transversal    |
| Phase Encoding Dir. | A >> P         |
| Phase Oversampling  | 100 %          |
| FOV Read            | 200 mm         |
| FOV Phase           | 100.0 %        |
| Slice Thickness     | 4.0 mm         |
| TR                  | 2000.0 ms      |
| TE                  | 18.00 ms       |
| Averages            | 1              |
| Concatenations      | 3              |
| AutoAlign           | Spine > Lumbar |

## Contrast - Common

|                      |               |
|----------------------|---------------|
| TR                   | 2000.0 ms     |
| TE                   | 18.00 ms      |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 804 ms        |
| Freeze Suppr. Tissue | On            |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 130 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

## Contrast - Dynamic

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

## Contrast - Dynamic

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

## Resolution - Common

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 4.0 mm  |
| Base Resolution  | 256     |
| Phase Resolution | 75 %    |
| Interpolation    | On      |

## Resolution - Acceleration

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 26         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

## Resolution - Filter

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

## Geometry - Common

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 40          |
| Distance Factor     | 10 %        |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 200 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 4.0 mm      |
| TR                  | 2000.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 3           |

## Geometry - AutoAlign

|                     |                 |
|---------------------|-----------------|
| Slice Group         | 1               |
| Position            | Isocenter       |
| Orientation         | Transversal     |
| Phase Encoding Dir. | A >> P          |
| AutoAlign           | Spine > Lumbar  |
| Initial Position    | L0.0 P0.0 H60.0 |
| L                   | 0.0 mm          |
| P                   | 0.0 mm          |

**Geometry - AutoAlign**

|                     |             |
|---------------------|-------------|
| H                   | 60.0 mm     |
| Initial Orientation | Transversal |
| Initial Rotation    | 0.40 deg    |

**Geometry - Navigator****Geometry - Saturation**

|                    |                     |
|--------------------|---------------------|
| Saturation Region  | 1                   |
| Thickness          | 35.00 mm            |
| Position           | L0.0 A40.0 H60.0 mm |
| Orientation        | Coronal             |
| Shape              | Standard            |
| Special Saturation | None                |

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 60 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Standard |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

|             |             |
|-------------|-------------|
| Position    | Isocenter   |
| Orientation | Transversal |
| Rotation    | 0.40 deg    |
| A >> P      | 200 mm      |
| R >> L      | 200 mm      |
| F >> H      | 176 mm      |
| Reset       | Off         |

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 2000.0 ms |
| Concatenations  | 3         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 804 ms        |
| Dark Blood         | Off           |
| FOV Read           | 200 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 75 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 3   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | tir       |
| Dimension         | 2D        |
| RF Pulse Type     | Normal    |
| Gradient Mode     | Fast      |
| Flow Compensation | None      |
| Bandwidth         | 233 Hz/Px |
| Echo Spacing      | 9.06 ms   |
| Free Echo Spacing | Off       |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Define                | Turbo Factor |
| Turbo Factor          | 5            |
| Echo Trains per Slice | 29           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |                 |
|----------------|-----------------|
| SAR Assistant  | TR > Flip Angle |
| Min Flip Angle | 130 deg         |
| Max. TR        | 2000.0 ms       |
| Allowed Delay  | 60 s            |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\t2\_me2d\_tra\_p2 for cord injury \*

TA: 3:20 min Coil Selection: Auto Voxel Size: 0.4x0.4x4.0 mm<sup>3</sup> Acc:: 2 Rel. SNR: 1.00

## Properties

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

## Routine

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 38                  |
| Distance Factor     | 10 %                |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| Phase Oversampling  | 40 %                |
| FOV Read            | 180 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 4.0 mm              |
| TR                  | 641.0 ms            |
| TE                  | 14.00 ms            |
| Averages            | 1                   |
| Concatenations      | 2                   |
| AutoAlign           | Spine > Cervical    |

## Contrast - Common

|                    |           |
|--------------------|-----------|
| TR                 | 641.0 ms  |
| TE                 | 14.00 ms  |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Flip Angle         | 30 deg    |
| Fat-Water Contrast | Standard  |
| Combined Echoes    | 4         |
| Reconstruction     | Magnitude |

## Contrast - Dynamic

|                 |          |
|-----------------|----------|
| Dynamic Mode    | Standard |
| Measurements    | 1        |
| Multiple Series | Off      |

## Resolution - Common

|           |         |
|-----------|---------|
| FOV Read  | 180 mm  |
| FOV Phase | 100.0 % |

## Resolution - Common

|                  |        |
|------------------|--------|
| Slice Thickness  | 4.0 mm |
| Base Resolution  | 256    |
| Phase Resolution | 80 %   |
| Interpolation    | On     |

## Resolution - Acceleration

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 2          |
| Reference Lines PE     | 24         |
| Phase Partial Fourier  | Off        |

## Resolution - Filter

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

## Geometry - Common

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 38                  |
| Distance Factor     | 10 %                |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| Phase Oversampling  | 40 %                |
| FOV Read            | 180 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 4.0 mm              |
| TR                  | 641.0 ms            |
| Multi-Slice Mode    | Interleaved         |
| Series              | Interleaved         |
| Concatenations      | 2                   |

## Geometry - AutoAlign

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| AutoAlign           | Spine > Cervical    |
| Initial Position    | L7.9 P15.4 H24.4    |
| L                   | 7.9 mm              |
| P                   | 15.4 mm             |
| H                   | 24.4 mm             |
| Initial Orientation | T > C               |
| T > C               | 8.00                |
| > S                 | 0.00                |
| Initial Rotation    | 0.00 deg            |

**Geometry - Saturation**

|                    |                     |
|--------------------|---------------------|
| Saturation Region  | 1                   |
| Thickness          | 80.00 mm            |
| Position           | L0.0 A51.0 F17.1 mm |
| Orientation        | C > T-18.5          |
| Special Saturation | None                |

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 24 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Standard |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

|             |                     |
|-------------|---------------------|
| Position    | L7.9 P15.4 H24.4 mm |
| Orientation | T > C8.0            |
| Rotation    | 0.00 deg            |
| A >> P      | 180 mm              |
| R >> L      | 180 mm              |
| F >> H      | 167 mm              |
| Reset       | Off                 |

**System - pTx**

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

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |          |
|-----------------|----------|
| 1st Signal/Mode | None     |
| TR              | 641.0 ms |

**Physio - Signal**

|                |   |
|----------------|---|
| Concatenations | 2 |
|----------------|---|

**Inline - Subtraction**

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

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | me_r      |
| Dimension         | 2D        |
| RF Pulse Type     | Normal    |
| Gradient Mode     | Fast      |
| Flow Compensation | On        |
| Bandwidth         | 260 Hz/Px |

**Sequence - Part 2**

|              |    |
|--------------|----|
| Introduction | On |
| RF Spoiling  | On |

**Sequence - Assistant**

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

## \\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\Cor t2 \*

TA: 1:56 min Coil Selection: Auto Voxel Size: 0.3×0.3×3.0 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

|                                               |                    |
|-----------------------------------------------|--------------------|
| Start measurement without further preparation | On                 |
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Disable auto transfer to PACS                 | Off                |
| Load Images to Stamp Segments                 | On                 |
| Load Images to Graphic Segments               | On                 |
| Graphic segment                               | 3rd Segment        |
| Inline Movie                                  | Off                |

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 180 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 304     |
| Phase Resolution | 85 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 3          |
| Reference Lines PE     | 51         |
| Deep Resolve           | On         |
| Phase Partial Fourier  | Off        |

**Routine**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Slices              | 15               |
| Distance Factor     | 20 %             |
| Position            | Isocenter        |
| Orientation         | Coronal          |
| Phase Encoding Dir. | R >> L           |
| Phase Oversampling  | 100 %            |
| FOV Read            | 180 mm           |
| FOV Phase           | 100.0 %          |
| Slice Thickness     | 3.0 mm           |
| TR                  | 3000.0 ms        |
| TE                  | 97.00 ms         |
| Averages            | 2                |
| Concatenations      | 2                |
| AutoAlign           | Spine > Cervical |

**Resolution - Filter**

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

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Slice Group         | 1           |
| Slices              | 15          |
| Distance Factor     | 20 %        |
| Position            | Isocenter   |
| Orientation         | Coronal     |
| Phase Encoding Dir. | R >> L      |
| Phase Oversampling  | 100 %       |
| FOV Read            | 180 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 3.0 mm      |
| TR                  | 3000.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 2           |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 3000.0 ms |
| TE                 | 97.00 ms  |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | Restore   |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Geometry - AutoAlign**

|                     |                  |
|---------------------|------------------|
| Slice Group         | 1                |
| Position            | Isocenter        |
| Orientation         | Coronal          |
| Phase Encoding Dir. | R >> L           |
| AutoAlign           | Spine > Cervical |
| Initial Position    | Isocenter        |
| L                   | 0.0 mm           |
| P                   | 0.0 mm           |
| H                   | 0.0 mm           |
| Initial Orientation | Coronal          |
| Initial Rotation    | 0.00 deg         |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 35.00 mm           |
| Position           | L0.0 A50.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 3000.0 ms |
| Concatenations  | 2         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 180 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 85 %     |
| Motion Correction  | None     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 2   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tseR_rr      |
| Dimension             | 2D           |
| RF Pulse Type         | Fast         |
| Gradient Mode         | Fast         |
| Flow Compensation     | Read         |
| Bandwidth             | 261 Hz/Px    |
| Echo Spacing          | 8.11 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 23           |
| Echo Trains per Slice | 9            |

**Sequence - Part 2**

|                  |           |
|------------------|-----------|
| Introduction     | On        |
| Phase Correction | Automatic |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Compensate T2 Decay      | Off  |
| Fast Mode                | Off  |
| WARP                     | Off  |
| Red. EC Sensitivity      | Off  |
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|               |           |
|---------------|-----------|
| SAR Assistant | TR        |
| Max. TR       | 4500.0 ms |
| Allowed Delay | 60 s      |

## \\NEURO\\Neuro Clinical BGR3\\Spine1\\Trauma T-L Spn\\localizer \*

TA: 21 sec Coil Selection: Auto Voxel Size: 0.6×0.6×6.0 mm<sup>3</sup> Acc.: None Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Phase Oversampling  | 38 %               |
| FOV Read            | 300 mm             |
| FOV Phase           | 100.0 %            |
| Slice Thickness     | 6.0 mm             |
| TR                  | 7.8 ms             |
| TE                  | 3.69 ms            |
| Averages            | 1                  |
| Concatenations      | 9                  |
| AutoAlign           | ---                |

**Contrast - Common**

|                   |         |
|-------------------|---------|
| TR                | 7.8 ms  |
| TE                | 3.69 ms |
| TD                | 0.00 ms |
| MTC               | Off     |
| Magn. Preparation | None    |
| Flip Angle        | 20 deg  |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| SWI                | Off       |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 300 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 6.0 mm  |
| Base Resolution  | 256     |
| Phase Resolution | 80 %    |
| Interpolation    | On      |

**Resolution - Acceleration**

|                       |      |
|-----------------------|------|
| Acceleration Mode     | None |
| Deep Resolve          | Off  |
| Phase Partial Fourier | Off  |
| Asymmetric Echo       | Off  |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Slices              | 5                  |
| Distance Factor     | 300 %              |
| Position            | L0.0 P20.0 H0.0 mm |

**Geometry - Common**

|                     |             |
|---------------------|-------------|
| Orientation         | Coronal     |
| Phase Encoding Dir. | R >> L      |
| Phase Oversampling  | 38 %        |
| FOV Read            | 300 mm      |
| FOV Phase           | 100.0 %     |
| Slice Thickness     | 6.0 mm      |
| TR                  | 7.8 ms      |
| Multi-Slice Mode    | Sequential  |
| Series              | Interleaved |
| Concatenations      | 9           |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 2                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| Slice Group         | 3                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Coronal            |
| Phase Encoding Dir. | R >> L             |
| AutoAlign           | ---                |
| Initial Position    | L0.0 P92.0 H0.0    |
| L                   | 0.0 mm             |
| P                   | 92.0 mm            |
| H                   | 0.0 mm             |
| Initial Orientation | Transversal        |
| Initial Rotation    | 0.00 deg           |

**Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |            |
|--------------|------------|
| B1 Shim      | TrueForm   |
| Excitation   | Slice-sel. |
| LR Balancing | Off        |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |        |
|-----------------|--------|
| 1st Signal/Mode | None   |
| TR              | 7.8 ms |
| Segments        | 1      |
| Concatenations  | 9      |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Tagging            | None     |
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 300 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 80 %     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 9   |

**Inline - Liver**

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

**Inline - Subtraction**

|          |     |
|----------|-----|
| Subtract | Off |
|----------|-----|

**Inline - Subtraction**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

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

**Inline - MapIt**

|                      |         |
|----------------------|---------|
| MapIt                | None    |
| Flip Angle           | 20 deg  |
| Measurements         | 1       |
| Contrasts            | 1       |
| TE                   | 3.69 ms |
| TR                   | 7.8 ms  |
| Save Original Images | On      |

**Sequence - Part 1**

|                   |            |
|-------------------|------------|
| Sequence Name     | fl         |
| Dimension         | 2D         |
| Excitation        | Slice-sel. |
| RF Pulse Type     | Normal     |
| Gradient Mode     | Normal     |
| Flow Compensation | None       |
| Bandwidth         | 320 Hz/Px  |
| Asymmetric Echo   | Off        |
| Segments          | 1          |

**Sequence - Part 2**

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

**Sequence - Assistant**

|               |     |
|---------------|-----|
| SAR Assistant | Off |
| Allowed Delay | 0 s |

**\\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\T2\_stir\_sag\_p2 \***TA: 2:06 min Coil Selection: Auto Voxel Size: 0.8×0.8×3.0 mm<sup>3</sup> Acc:: 2 Rel. SNR: 1.00**Properties**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 260 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 75 %    |
| Interpolation    | Off     |

**Resolution - Acceleration**

|                        |                  |
|------------------------|------------------|
| Acceleration Mode      | GRAPPA           |
| Reference Scans        | Self-calibration |
| Acceleration Factor PE | 2                |
| Reference Lines PE     | 32               |
| Deep Resolve           | Off              |
| Phase Partial Fourier  | Off              |

**Routine**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 20                 |
| Distance Factor     | 10 %               |
| Position            | L5.6 P27.8 F5.2 mm |
| Orientation         | Sagittal           |
| Phase Encoding Dir. | H >> F             |
| Phase Oversampling  | 80 %               |
| FOV Read            | 260 mm             |
| FOV Phase           | 100.0 %            |
| Slice Thickness     | 3.0 mm             |
| TR                  | 4000.0 ms          |
| TE                  | 46.00 ms           |
| Averages            | 2                  |
| Concatenations      | 1                  |
| AutoAlign           | Spine > Cervical   |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 20                 |
| Distance Factor     | 10 %               |
| Position            | L5.6 P27.8 F5.2 mm |
| Orientation         | Sagittal           |
| Phase Encoding Dir. | H >> F             |
| Phase Oversampling  | 80 %               |
| FOV Read            | 260 mm             |
| FOV Phase           | 100.0 %            |
| Slice Thickness     | 3.0 mm             |
| TR                  | 4000.0 ms          |
| Multi-Slice Mode    | Interleaved        |
| Series              | Interleaved        |
| Concatenations      | 1                  |

**Contrast - Common**

|                      |               |
|----------------------|---------------|
| TR                   | 4000.0 ms     |
| TE                   | 46.00 ms      |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 220 ms        |
| Freeze Suppr. Tissue | Off           |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 160 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Position            | L5.6 P27.8 F5.2 mm |
| Orientation         | Sagittal           |
| Phase Encoding Dir. | H >> F             |
| AutoAlign           | Spine > Cervical   |
| Initial Position    | Isocenter          |
| L                   | 0.0 mm             |
| P                   | 0.0 mm             |
| F                   | 0.0 mm             |
| Initial Orientation | Transversal        |
| Initial Rotation    | 0.00 deg           |

**Contrast - Dynamic**

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

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 80.00 mm           |
| Position           | L0.0 A54.9 F7.5 mm |
| Orientation        | C > T-8.2          |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

|                     |       |
|---------------------|-------|
| Set-n-Go Protocol   | Off   |
| Table Position      | 5 mm  |
| Table Position      | F     |
| Inline Composing    | On    |
| Normalize           | Off   |
| Save non-normalized | On    |
| Composing Function  | Spine |
| Series Description  |       |
| Composing Group     | 1     |
| Last Step           | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 4000.0 ms |
| Concatenations  | 1         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 220 ms        |
| Dark Blood         | Off           |
| FOV Read           | 260 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 75 %          |
| Motion Correction  | None          |

**Physio - PACE**

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

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

|                     |       |
|---------------------|-------|
| Inline Composing    | On    |
| Normalize           | Off   |
| Save non-normalized | On    |
| Composing Function  | Spine |
| Composing Group     | 1     |
| Last Step           | Off   |
| Series Description  |       |

**Sequence - Part 1**

|               |        |
|---------------|--------|
| Sequence Name | tir_rr |
| Dimension     | 2D     |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| RF Pulse Type         | Normal       |
| Gradient Mode         | Normal       |
| Flow Compensation     | Read         |
| Bandwidth             | 252 Hz/Px    |
| Echo Spacing          | 9.12 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 15           |
| Echo Trains per Slice | 15           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |

\\NEURO\\Neuro Clinical BGR3\\Spine1\\Trauma T-L Spn\\t1\_tse\_dark-fluid\_sag\_24 \*

TA: 5:20 min Coil Selection: Auto Voxel Size: 0.7×0.7×3.0 mm<sup>3</sup> Acc:: 2 Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 24                 |
| Distance Factor     | 10 %               |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Sagittal           |
| Phase Encoding Dir. | H >> F             |
| Phase Oversampling  | 80 %               |
| FOV Read            | 220 mm             |
| FOV Phase           | 100.0 %            |
| Slice Thickness     | 3.0 mm             |
| TR                  | 1800.0 ms          |
| TE                  | 9.20 ms            |
| Averages            | 2                  |
| Concatenations      | 3                  |
| AutoAlign           | ---                |

**Contrast - Common**

|                      |               |
|----------------------|---------------|
| TR                   | 1800.0 ms     |
| TE                   | 9.20 ms       |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 818 ms        |
| Freeze Suppr. Tissue | On            |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 160 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

**Contrast - Dynamic**

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

**Contrast - Dynamic**

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 220 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 70 %    |
| Interpolation    | Off     |

**Resolution - Acceleration**

|                        |                  |
|------------------------|------------------|
| Acceleration Mode      | GRAPPA           |
| Reference Scans        | Self-calibration |
| Acceleration Factor PE | 2                |
| Reference Lines PE     | 32               |
| Deep Resolve           | Off              |
| Phase Partial Fourier  | Off              |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 24                 |
| Distance Factor     | 10 %               |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Sagittal           |
| Phase Encoding Dir. | H >> F             |
| Phase Oversampling  | 80 %               |
| FOV Read            | 220 mm             |
| FOV Phase           | 100.0 %            |
| Slice Thickness     | 3.0 mm             |
| TR                  | 1800.0 ms          |
| Multi-Slice Mode    | Interleaved        |
| Series              | Interleaved        |
| Concatenations      | 3                  |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Sagittal           |
| Phase Encoding Dir. | H >> F             |
| AutoAlign           | ---                |
| Initial Position    | L0.0 P20.0 H0.0    |
| L                   | 0.0 mm             |
| P                   | 20.0 mm            |

**Geometry - AutoAlign**

|                     |           |
|---------------------|-----------|
| H                   | 0.0 mm    |
| Initial Orientation | Sagittal  |
| Initial Rotation    | 90.00 deg |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 80.00 mm           |
| Position           | L0.0 A60.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

|                     |       |
|---------------------|-------|
| Set-n-Go Protocol   | Off   |
| Table Position      | 0 mm  |
| Table Position      | H     |
| Inline Composing    | On    |
| Normalize           | Off   |
| Save non-normalized | On    |
| Composing Function  | Spine |
| Series Description  |       |
| Composing Group     | 1     |
| Last Step           | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - Adjust Volume**

|       |     |
|-------|-----|
| Reset | Off |
|-------|-----|

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 1800.0 ms |
| Concatenations  | 3         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 818 ms        |
| Dark Blood         | Off           |
| FOV Read           | 220 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 70 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 3   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

|                     |       |
|---------------------|-------|
| Inline Composing    | On    |
| Normalize           | Off   |
| Save non-normalized | On    |
| Composing Function  | Spine |

**Inline - Composing**

|                    |     |
|--------------------|-----|
| Composing Group    | 1   |
| Last Step          | Off |
| Series Description |     |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tir          |
| Dimension             | 2D           |
| RF Pulse Type         | Normal       |
| Gradient Mode         | Fast         |
| Flow Compensation     | None         |
| Bandwidth             | 220 Hz/Px    |
| Echo Spacing          | 9.16 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 7            |
| Echo Trains per Slice | 29           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |                 |
|----------------|-----------------|
| SAR Assistant  | Flip Angle > TR |
| Min Flip Angle | 140 deg         |
| Max. TR        | 2300.0 ms       |
| Allowed Delay  | 60 s            |

## \\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\T2\_tse\_sag\_384 \*

TA: 2:09 min Coil Selection: Auto Voxel Size: 0.6×0.6×3.0 mm<sup>3</sup> Acc:: 2 Rel. SNR: 1.00**Properties**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 220 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 384     |
| Phase Resolution | 80 %    |
| Interpolation    | Off     |

**Resolution - Acceleration**

|                        |                  |
|------------------------|------------------|
| Acceleration Mode      | GRAPPA           |
| Reference Scans        | Self-calibration |
| Acceleration Factor PE | 2                |
| Reference Lines PE     | 32               |
| Deep Resolve           | Off              |
| Phase Partial Fourier  | Off              |

**Routine**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 20                  |
| Distance Factor     | 10 %                |
| Position            | L5.6 P38.1 H23.9 mm |
| Orientation         | Sagittal            |
| Phase Encoding Dir. | H >> F              |
| Phase Oversampling  | 80 %                |
| FOV Read            | 220 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 3.0 mm              |
| TR                  | 4110.0 ms           |
| TE                  | 106.00 ms           |
| Averages            | 2                   |
| Concatenations      | 1                   |
| AutoAlign           | Spine > Cervical    |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 20                  |
| Distance Factor     | 10 %                |
| Position            | L5.6 P38.1 H23.9 mm |
| Orientation         | Sagittal            |
| Phase Encoding Dir. | H >> F              |
| Phase Oversampling  | 80 %                |
| FOV Read            | 220 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 3.0 mm              |
| TR                  | 4110.0 ms           |
| Multi-Slice Mode    | Interleaved         |
| Series              | Interleaved         |
| Concatenations      | 1                   |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 4110.0 ms |
| TE                 | 106.00 ms |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | None      |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Geometry - AutoAlign**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Position            | L5.6 P38.1 H23.9 mm |
| Orientation         | Sagittal            |
| Phase Encoding Dir. | H >> F              |
| AutoAlign           | Spine > Cervical    |
| Initial Position    | Isocenter           |
| L                   | 0.0 mm              |
| P                   | 0.0 mm              |
| H                   | 0.0 mm              |
| Initial Orientation | Transversal         |
| Initial Rotation    | 0.00 deg            |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 80.00 mm           |
| Position           | L0.0 A54.9 F7.5 mm |
| Orientation        | C > T-8.2          |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

|                     |       |
|---------------------|-------|
| Set-n-Go Protocol   | Off   |
| Table Position      | 24 mm |
| Table Position      | H     |
| Inline Composing    | On    |
| Normalize           | Off   |
| Save non-normalized | On    |
| Composing Function  | Spine |
| Series Description  |       |
| Composing Group     | 1     |
| Last Step           | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 4110.0 ms |
| Concatenations  | 1         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 220 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 80 %     |
| Motion Correction  | None     |

**Physio - PACE**

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

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

|                     |       |
|---------------------|-------|
| Inline Composing    | On    |
| Normalize           | Off   |
| Save non-normalized | On    |
| Composing Function  | Spine |
| Composing Group     | 1     |
| Last Step           | Off   |
| Series Description  |       |

**Sequence - Part 1**

|               |        |
|---------------|--------|
| Sequence Name | tse_rr |
| Dimension     | 2D     |
| RF Pulse Type | Normal |

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Gradient Mode         | Normal       |
| Flow Compensation     | Read         |
| Bandwidth             | 260 Hz/Px    |
| Echo Spacing          | 9.62 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 19           |
| Echo Trains per Slice | 15           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|               |           |
|---------------|-----------|
| SAR Assistant | TR        |
| Max. TR       | 4500.0 ms |
| Allowed Delay | 60 s      |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spnlt2\_tse\_tra\_448 \*

TA: 4:23 min Coil Selection: Auto Voxel Size: 0.6×0.6×4.0 mm<sup>3</sup> Acc:: None Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                      |
|---------------------|----------------------|
| Slice Group         | 1                    |
| Slices              | 56                   |
| Distance Factor     | 10 %                 |
| Position            | L0.6 P48.8 F377.7 mm |
| Orientation         | T > C-7.7            |
| Phase Encoding Dir. | A >> P               |
| Phase Oversampling  | 30 %                 |
| FOV Read            | 200 mm               |
| FOV Phase           | 100.0 %              |
| Slice Thickness     | 4.0 mm               |
| TR                  | 5800.0 ms            |
| TE                  | 105.00 ms            |
| Averages            | 1                    |
| Concatenations      | 3                    |
| AutoAlign           | Spine > Cervical     |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 5800.0 ms |
| TE                 | 105.00 ms |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | None      |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 4.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 75 %    |
| Interpolation    | Off     |

**Resolution - Acceleration**

|                       |      |
|-----------------------|------|
| Acceleration Mode     | None |
| Deep Resolve          | Off  |
| Phase Partial Fourier | Off  |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                      |
|---------------------|----------------------|
| Slice Group         | 1                    |
| Slices              | 56                   |
| Distance Factor     | 10 %                 |
| Position            | L0.6 P48.8 F377.7 mm |
| Orientation         | T > C-7.7            |
| Phase Encoding Dir. | A >> P               |
| Phase Oversampling  | 30 %                 |
| FOV Read            | 200 mm               |
| FOV Phase           | 100.0 %              |
| Slice Thickness     | 4.0 mm               |
| TR                  | 5800.0 ms            |
| Multi-Slice Mode    | Interleaved          |
| Series              | Interleaved          |
| Concatenations      | 3                    |

**Geometry - AutoAlign**

|                     |                      |
|---------------------|----------------------|
| Slice Group         | 1                    |
| Position            | L0.6 P48.8 F377.7 mm |
| Orientation         | T > C-7.7            |
| Phase Encoding Dir. | A >> P               |
| AutoAlign           | Spine > Cervical     |
| Initial Position    | L0.6 P48.8 F377.7    |
| L                   | 0.6 mm               |
| P                   | 48.8 mm              |
| F                   | 377.7 mm             |
| Initial Orientation | T > C                |
| T > C               | -7.70                |
| > S                 | 0.00                 |
| Initial Rotation    | 0.00 deg             |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 80.00 mm           |
| Position           | L0.0 P41.6 F7.5 mm |
| Orientation        | C > T10.2          |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

|                   |        |
|-------------------|--------|
| Set-n-Go Protocol | Off    |
| Table Position    | 378 mm |
| Table Position    | F      |
| Inline Composing  | Off    |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 5800.0 ms |
| Concatenations  | 3         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 200 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 75 %     |
| Motion Correction  | None     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 3   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tse_rs       |
| Dimension             | 2D           |
| RF Pulse Type         | Low SAR      |
| Gradient Mode         | Normal       |
| Flow Compensation     | Slice        |
| Bandwidth             | 256 Hz/Px    |
| Echo Spacing          | 11.7 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 23           |
| Echo Trains per Slice | 14           |

**Sequence - Part 2**

|                  |           |
|------------------|-----------|
| Introduction     | On        |
| Phase Correction | Automatic |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Compensate T2 Decay      | Off  |
| Fast Mode                | Off  |
| WARP                     | Off  |
| Red. EC Sensitivity      | Off  |
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |

\\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\t2\_tse\_tra\_448\_under 2yrs \*

TA: 4:23 min Coil Selection: Auto Voxel Size: 0.6×0.6×3.0 mm<sup>3</sup> Acc:: None Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                      |
|---------------------|----------------------|
| Slice Group         | 1                    |
| Slices              | 56                   |
| Distance Factor     | 10 %                 |
| Position            | L0.6 P48.8 F377.7 mm |
| Orientation         | T > C-7.7            |
| Phase Encoding Dir. | A >> P               |
| Phase Oversampling  | 30 %                 |
| FOV Read            | 200 mm               |
| FOV Phase           | 100.0 %              |
| Slice Thickness     | 3.0 mm               |
| TR                  | 5800.0 ms            |
| TE                  | 105.00 ms            |
| Averages            | 1                    |
| Concatenations      | 3                    |
| AutoAlign           | Spine > Cervical     |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 5800.0 ms |
| TE                 | 105.00 ms |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 160 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | None      |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 200 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 75 %    |
| Interpolation    | Off     |

**Resolution - Acceleration**

|                       |      |
|-----------------------|------|
| Acceleration Mode     | None |
| Deep Resolve          | Off  |
| Phase Partial Fourier | Off  |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                      |
|---------------------|----------------------|
| Slice Group         | 1                    |
| Slices              | 56                   |
| Distance Factor     | 10 %                 |
| Position            | L0.6 P48.8 F377.7 mm |
| Orientation         | T > C-7.7            |
| Phase Encoding Dir. | A >> P               |
| Phase Oversampling  | 30 %                 |
| FOV Read            | 200 mm               |
| FOV Phase           | 100.0 %              |
| Slice Thickness     | 3.0 mm               |
| TR                  | 5800.0 ms            |
| Multi-Slice Mode    | Interleaved          |
| Series              | Interleaved          |
| Concatenations      | 3                    |

**Geometry - AutoAlign**

|                     |                      |
|---------------------|----------------------|
| Slice Group         | 1                    |
| Position            | L0.6 P48.8 F377.7 mm |
| Orientation         | T > C-7.7            |
| Phase Encoding Dir. | A >> P               |
| AutoAlign           | Spine > Cervical     |
| Initial Position    | L0.6 P48.8 F377.7    |
| L                   | 0.6 mm               |
| P                   | 48.8 mm              |
| F                   | 377.7 mm             |
| Initial Orientation | T > C                |
| T > C               | -7.70                |
| > S                 | 0.00                 |
| Initial Rotation    | 0.00 deg             |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 80.00 mm           |
| Position           | L0.0 P41.6 F7.5 mm |
| Orientation        | C > T10.2          |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

|                   |        |
|-------------------|--------|
| Set-n-Go Protocol | Off    |
| Table Position    | 378 mm |
| Table Position    | F      |
| Inline Composing  | Off    |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 5800.0 ms |
| Concatenations  | 3         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 200 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 75 %     |
| Motion Correction  | None     |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 3   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tse_rs       |
| Dimension             | 2D           |
| RF Pulse Type         | Low SAR      |
| Gradient Mode         | Normal       |
| Flow Compensation     | Slice        |
| Bandwidth             | 256 Hz/Px    |
| Echo Spacing          | 11.7 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 23           |
| Echo Trains per Slice | 14           |

**Sequence - Part 2**

|                  |           |
|------------------|-----------|
| Introduction     | On        |
| Phase Correction | Automatic |

**Sequence - Part 2**

|                          |      |
|--------------------------|------|
| Compensate T2 Decay      | Off  |
| Fast Mode                | Off  |
| WARP                     | Off  |
| Red. EC Sensitivity      | Off  |
| Acoustic noise reduction | Off  |
| Reduce Motion Sens.      | On   |
| Motion Correction        | None |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |

\\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\t2\_stir\_cor\_p2 \*

TA: 2:07 min Coil Selection: Auto Voxel Size: 0.7×0.7×4.0 mm<sup>3</sup> Acc:: 2 Rel. SNR: 1.00**Properties**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 220 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 4.0 mm  |
| Base Resolution  | 320     |
| Phase Resolution | 75 %    |
| Interpolation    | Off     |

**Resolution - Acceleration**

|                        |                  |
|------------------------|------------------|
| Acceleration Mode      | GRAPPA           |
| Reference Scans        | Self-calibration |
| Acceleration Factor PE | 2                |
| Reference Lines PE     | 32               |
| Deep Resolve           | Off              |
| Phase Partial Fourier  | Off              |

**Routine**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 20                  |
| Distance Factor     | 10 %                |
| Position            | L0.8 P34.2 H18.1 mm |
| Orientation         | Coronal             |
| Phase Encoding Dir. | R >> L              |
| Phase Oversampling  | 80 %                |
| FOV Read            | 220 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 4.0 mm              |
| TR                  | 4040.0 ms           |
| TE                  | 47.00 ms            |
| Averages            | 2                   |
| Concatenations      | 1                   |
| AutoAlign           | Spine > Cervical    |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 20                  |
| Distance Factor     | 10 %                |
| Position            | L0.8 P34.2 H18.1 mm |
| Orientation         | Coronal             |
| Phase Encoding Dir. | R >> L              |
| Phase Oversampling  | 80 %                |
| FOV Read            | 220 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 4.0 mm              |
| TR                  | 4040.0 ms           |
| Multi-Slice Mode    | Interleaved         |
| Series              | Interleaved         |
| Concatenations      | 1                   |

**Contrast - Common**

|                      |               |
|----------------------|---------------|
| TR                   | 4040.0 ms     |
| TE                   | 47.00 ms      |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 220 ms        |
| Freeze Suppr. Tissue | Off           |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 121 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

**Geometry - AutoAlign**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Position            | L0.8 P34.2 H18.1 mm |
| Orientation         | Coronal             |
| Phase Encoding Dir. | R >> L              |
| AutoAlign           | Spine > Cervical    |
| Initial Position    | L0.8 P34.2 H18.1    |
| L                   | 0.8 mm              |
| P                   | 34.2 mm             |
| H                   | 18.1 mm             |
| Initial Orientation | Coronal             |
| Initial Rotation    | 0.00 deg            |

**Contrast - Dynamic**

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

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 80.00 mm           |
| Position           | L0.0 A48.2 F7.3 mm |
| Orientation        | C > T-8.6          |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 18 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 4040.0 ms |
| Concatenations  | 1         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 220 ms        |
| Dark Blood         | Off           |
| FOV Read           | 220 mm        |
| FOV Phase          | 100.0 %       |
| Phase Resolution   | 75 %          |
| Motion Correction  | None          |

**Physio - PACE**

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

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tir_rr       |
| Dimension             | 2D           |
| RF Pulse Type         | Normal       |
| Gradient Mode         | Normal       |
| Flow Compensation     | Read         |
| Bandwidth             | 252 Hz/Px    |
| Echo Spacing          | 9.38 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 15           |
| Echo Trains per Slice | 15           |

**Sequence - Part 2**

|              |    |
|--------------|----|
| Introduction | On |
|--------------|----|

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |

## \\NEURO\\Neuro Clinical BGR3\\Spine1\\Trauma T-L Spn\\t1\_tse\_dark-fluid\_tra \*

TA: 6:38 min Coil Selection: Auto Voxel Size: 0.8×0.8×4.0 mm<sup>3</sup> Acc:: None Rel. SNR: 1.00**Properties**

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

**Contrast - Dynamic**

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

**Resolution - Common**

|                  |        |
|------------------|--------|
| FOV Read         | 200 mm |
| FOV Phase        | 81.3 % |
| Slice Thickness  | 4.0 mm |
| Base Resolution  | 256    |
| Phase Resolution | 75 %   |
| Interpolation    | Off    |

**Resolution - Acceleration**

|                       |      |
|-----------------------|------|
| Acceleration Mode     | None |
| Deep Resolve          | Off  |
| Phase Partial Fourier | Off  |

**Routine**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 40                 |
| Distance Factor     | 10 %               |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Transversal        |
| Phase Encoding Dir. | A >> P             |
| Phase Oversampling  | 20 %               |
| FOV Read            | 200 mm             |
| FOV Phase           | 81.3 %             |
| Slice Thickness     | 4.0 mm             |
| TR                  | 1800.0 ms          |
| TE                  | 9.30 ms            |
| Averages            | 2                  |
| Concatenations      | 4                  |
| AutoAlign           | ---                |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 40                 |
| Distance Factor     | 10 %               |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Transversal        |
| Phase Encoding Dir. | A >> P             |
| Phase Oversampling  | 20 %               |
| FOV Read            | 200 mm             |
| FOV Phase           | 81.3 %             |
| Slice Thickness     | 4.0 mm             |
| TR                  | 1800.0 ms          |
| Multi-Slice Mode    | Interleaved        |
| Series              | Interleaved        |
| Concatenations      | 4                  |

**Contrast - Common**

|                      |               |
|----------------------|---------------|
| TR                   | 1800.0 ms     |
| TE                   | 9.30 ms       |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 818 ms        |
| Freeze Suppr. Tissue | On            |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 160 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Transversal        |
| Phase Encoding Dir. | A >> P             |
| AutoAlign           | ---                |
| Initial Position    | L0.0 P20.0 H0.0    |
| L                   | 0.0 mm             |
| P                   | 20.0 mm            |
| H                   | 0.0 mm             |
| Initial Orientation | Transversal        |
| Initial Rotation    | 0.00 deg           |

**Contrast - Dynamic**

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 80.00 mm           |
| Position           | L0.0 A60.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 1800.0 ms |
| Concatenations  | 4         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 818 ms        |
| Dark Blood         | Off           |
| FOV Read           | 200 mm        |
| FOV Phase          | 81.3 %        |
| Phase Resolution   | 75 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 4   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tir          |
| Dimension             | 2D           |
| RF Pulse Type         | Normal       |
| Gradient Mode         | Fast         |
| Flow Compensation     | None         |
| Bandwidth             | 219 Hz/Px    |
| Echo Spacing          | 9.30 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 7            |
| Echo Trains per Slice | 27           |

**Sequence - Part 2**

|              |    |
|--------------|----|
| Introduction | On |
|--------------|----|

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |                 |
|----------------|-----------------|
| SAR Assistant  | Flip Angle > TR |
| Min Flip Angle | 140 deg         |
| Max. TR        | 2000.0 ms       |
| Allowed Delay  | 60 s            |

\\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\1\_tse\_dark-fluid\_tra\_under 2yrs \*

TA: 4:59 min Coil Selection: Auto Voxel Size: 0.8×0.8×3.0 mm<sup>3</sup> Acc.: None Rel. SNR: 1.00**Properties**

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

**Contrast - Dynamic**

|                 |                  |
|-----------------|------------------|
| Multiple Series | Each Measurement |
|-----------------|------------------|

**Resolution - Common**

|                  |        |
|------------------|--------|
| FOV Read         | 200 mm |
| FOV Phase        | 81.3 % |
| Slice Thickness  | 3.0 mm |
| Base Resolution  | 256    |
| Phase Resolution | 75 %   |
| Interpolation    | Off    |

**Resolution - Acceleration**

|                       |      |
|-----------------------|------|
| Acceleration Mode     | None |
| Deep Resolve          | Off  |
| Phase Partial Fourier | Off  |

**Routine**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 30                 |
| Distance Factor     | 10 %               |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Transversal        |
| Phase Encoding Dir. | A >> P             |
| Phase Oversampling  | 20 %               |
| FOV Read            | 200 mm             |
| FOV Phase           | 81.3 %             |
| Slice Thickness     | 3.0 mm             |
| TR                  | 1800.0 ms          |
| TE                  | 9.30 ms            |
| Averages            | 2                  |
| Concatenations      | 3                  |
| AutoAlign           | ---                |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Slices              | 30                 |
| Distance Factor     | 10 %               |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Transversal        |
| Phase Encoding Dir. | A >> P             |
| Phase Oversampling  | 20 %               |
| FOV Read            | 200 mm             |
| FOV Phase           | 81.3 %             |
| Slice Thickness     | 3.0 mm             |
| TR                  | 1800.0 ms          |
| Multi-Slice Mode    | Interleaved        |
| Series              | Interleaved        |
| Concatenations      | 3                  |

**Contrast - Common**

|                      |               |
|----------------------|---------------|
| TR                   | 1800.0 ms     |
| TE                   | 9.30 ms       |
| TD                   | 0.00 ms       |
| MTC                  | Off           |
| Magn. Preparation    | Slice-sel. IR |
| TI                   | 818 ms        |
| Freeze Suppr. Tissue | On            |
| Flip Angle Mode      | Constant      |
| Flip Angle           | 160 deg       |
| Fat-Water Contrast   | Standard      |
| Dark Blood           | Off           |
| Contrasts            | 1             |
| Wrap-up Magn.        | None          |
| Reconstruction       | Magnitude     |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slice Group         | 1                  |
| Position            | L0.0 P20.0 H0.0 mm |
| Orientation         | Transversal        |
| Phase Encoding Dir. | A >> P             |
| AutoAlign           | ---                |
| Initial Position    | L0.0 P20.0 H0.0    |
| L                   | 0.0 mm             |
| P                   | 20.0 mm            |
| H                   | 0.0 mm             |
| Initial Orientation | Transversal        |
| Initial Rotation    | 0.00 deg           |

**Contrast - Dynamic**

|              |          |
|--------------|----------|
| Dynamic Mode | Standard |
| Measurements | 1        |

**Geometry - Navigator****Geometry - Saturation**

|                    |                    |
|--------------------|--------------------|
| Saturation Region  | 1                  |
| Thickness          | 80.00 mm           |
| Position           | L0.0 A60.0 H0.0 mm |
| Orientation        | Coronal            |
| Shape              | Standard           |
| Special Saturation | None               |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 1800.0 ms |
| Concatenations  | 3         |

**Physio - Cardiac**

|                    |               |
|--------------------|---------------|
| Fat-Water Contrast | Standard      |
| Magn. Preparation  | Slice-sel. IR |
| TI                 | 818 ms        |
| Dark Blood         | Off           |
| FOV Read           | 200 mm        |
| FOV Phase          | 81.3 %        |
| Phase Resolution   | 75 %          |
| Motion Correction  | None          |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. Control  | Off |
| Concatenations | 3   |

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tir          |
| Dimension             | 2D           |
| RF Pulse Type         | Normal       |
| Gradient Mode         | Fast         |
| Flow Compensation     | None         |
| Bandwidth             | 219 Hz/Px    |
| Echo Spacing          | 9.30 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 7            |
| Echo Trains per Slice | 27           |

**Sequence - Part 2**

|              |    |
|--------------|----|
| Introduction | On |
|--------------|----|

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |
| Reduce Motion Sens.      | On        |
| Motion Correction        | None      |

**Sequence - Assistant**

|                |                 |
|----------------|-----------------|
| SAR Assistant  | Flip Angle > TR |
| Min Flip Angle | 140 deg         |
| Max. TR        | 2000.0 ms       |
| Allowed Delay  | 60 s            |

## \NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\T2\_me2d\_tra\_p2 or cord injury \*

TA: 4:56 min Coil Selection: Auto Voxel Size: 0.4x0.4x4.0 mm<sup>3</sup> Acc:: 2 Rel. SNR: 1.00**Properties**

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

**Routine**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 38                  |
| Distance Factor     | 10 %                |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| Phase Oversampling  | 0 %                 |
| FOV Read            | 180 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 4.0 mm              |
| TR                  | 641.0 ms            |
| TE                  | 14.00 ms            |
| Averages            | 2                   |
| Concatenations      | 2                   |
| AutoAlign           | Spine > Cervical    |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 641.0 ms  |
| TE                 | 14.00 ms  |
| TD                 | 0.00 ms   |
| MTC                | Off       |
| Flip Angle         | 30 deg    |
| Fat-Water Contrast | Standard  |
| Combined Echoes    | 4         |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

|                 |          |
|-----------------|----------|
| Dynamic Mode    | Standard |
| Measurements    | 1        |
| Multiple Series | Off      |

**Resolution - Common**

|           |         |
|-----------|---------|
| FOV Read  | 180 mm  |
| FOV Phase | 100.0 % |

**Resolution - Common**

|                  |        |
|------------------|--------|
| Slice Thickness  | 4.0 mm |
| Base Resolution  | 256    |
| Phase Resolution | 80 %   |
| Interpolation    | On     |

**Resolution - Acceleration**

|                        |            |
|------------------------|------------|
| Acceleration Mode      | GRAPPA     |
| Reference Scans        | Integrated |
| Acceleration Factor PE | 2          |
| Reference Lines PE     | 24         |
| Phase Partial Fourier  | Off        |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 38                  |
| Distance Factor     | 10 %                |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| Phase Oversampling  | 0 %                 |
| FOV Read            | 180 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 4.0 mm              |
| TR                  | 641.0 ms            |
| Multi-Slice Mode    | Interleaved         |
| Series              | Interleaved         |
| Concatenations      | 2                   |

**Geometry - AutoAlign**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Position            | L7.9 P15.4 H24.4 mm |
| Orientation         | T > C8.0            |
| Phase Encoding Dir. | A >> P              |
| AutoAlign           | Spine > Cervical    |
| Initial Position    | Isocenter           |
| L                   | 0.0 mm              |
| P                   | 0.0 mm              |
| H                   | 0.0 mm              |
| Initial Orientation | Transversal         |
| Initial Rotation    | 0.00 deg            |

**Geometry - Saturation**

|                   |   |
|-------------------|---|
| Saturation Region | 1 |
|-------------------|---|

**Geometry - Saturation**

|                    |                     |
|--------------------|---------------------|
| Thickness          | 80.00 mm            |
| Position           | L0.0 A51.0 F17.1 mm |
| Orientation        | C > T-18.5          |
| Special Saturation | None                |

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 24 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Standard |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

|             |                     |
|-------------|---------------------|
| Position    | L7.9 P15.4 H24.4 mm |
| Orientation | T > C8.0            |
| Rotation    | 0.00 deg            |
| A >> P      | 180 mm              |
| R >> L      | 180 mm              |
| F >> H      | 167 mm              |
| Reset       | Off                 |

**System - pTx**

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

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |          |
|-----------------|----------|
| 1st Signal/Mode | None     |
| TR              | 641.0 ms |
| Concatenations  | 2        |

**Inline - Subtraction**

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

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                   |           |
|-------------------|-----------|
| Sequence Name     | me_r      |
| Dimension         | 2D        |
| RF Pulse Type     | Normal    |
| Gradient Mode     | Fast      |
| Flow Compensation | On        |
| Bandwidth         | 260 Hz/Px |

**Sequence - Part 2**

|              |    |
|--------------|----|
| Introduction | On |
| RF Spoiling  | On |

**Sequence - Assistant**

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

**\\NEURO\Neuro Clinical BGR3\Spine1\Trauma T-L Spn\T2\_tse\_cor\_384 \***TA: 2:23 min Coil Selection: Auto Voxel Size: 0.6×0.6×3.0 mm<sup>3</sup> Acc:: 2 Rel. SNR: 1.00**Properties**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FOV Read         | 220 mm  |
| FOV Phase        | 100.0 % |
| Slice Thickness  | 3.0 mm  |
| Base Resolution  | 384     |
| Phase Resolution | 80 %    |
| Interpolation    | Off     |

**Resolution - Acceleration**

|                        |                  |
|------------------------|------------------|
| Acceleration Mode      | GRAPPA           |
| Reference Scans        | Self-calibration |
| Acceleration Factor PE | 2                |
| Reference Lines PE     | 32               |
| Deep Resolve           | Off              |
| Phase Partial Fourier  | Off              |

**Routine**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 22                  |
| Distance Factor     | 10 %                |
| Position            | L0.8 P37.8 H18.1 mm |
| Orientation         | C > T-11.5          |
| Phase Encoding Dir. | R >> L              |
| Phase Oversampling  | 80 %                |
| FOV Read            | 220 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 3.0 mm              |
| TR                  | 4560.0 ms           |
| TE                  | 105.00 ms           |
| Averages            | 2                   |
| Concatenations      | 1                   |
| AutoAlign           | Spine > Cervical    |

**Resolution - Filter**

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

**Geometry - Common**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Slices              | 22                  |
| Distance Factor     | 10 %                |
| Position            | L0.8 P37.8 H18.1 mm |
| Orientation         | C > T-11.5          |
| Phase Encoding Dir. | R >> L              |
| Phase Oversampling  | 80 %                |
| FOV Read            | 220 mm              |
| FOV Phase           | 100.0 %             |
| Slice Thickness     | 3.0 mm              |
| TR                  | 4560.0 ms           |
| Multi-Slice Mode    | Interleaved         |
| Series              | Interleaved         |
| Concatenations      | 1                   |

**Contrast - Common**

|                    |           |
|--------------------|-----------|
| TR                 | 4560.0 ms |
| TE                 | 105.00 ms |
| MTC                | Off       |
| Magn. Preparation  | None      |
| Flip Angle Mode    | Constant  |
| Flip Angle         | 142 deg   |
| Fat-Water Contrast | Standard  |
| Dark Blood         | Off       |
| Contrasts          | 1         |
| Wrap-up Magn.      | None      |
| Reconstruction     | Magnitude |

**Contrast - Dynamic**

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

**Geometry - AutoAlign**

|                     |                     |
|---------------------|---------------------|
| Slice Group         | 1                   |
| Position            | L0.8 P37.8 H18.1 mm |
| Orientation         | C > T-11.5          |
| Phase Encoding Dir. | R >> L              |
| AutoAlign           | Spine > Cervical    |
| Initial Position    | Isocenter           |
| L                   | 0.0 mm              |
| P                   | 0.0 mm              |
| H                   | 0.0 mm              |
| Initial Orientation | Transversal         |
| Initial Rotation    | 0.00 deg            |

**Geometry - Navigator****Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

|                   |       |
|-------------------|-------|
| Set-n-Go Protocol | Off   |
| Table Position    | 18 mm |
| Table Position    | H     |
| Inline Composing  | Off   |

**System - Miscellaneous**

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

**System - Adjustments**

|                       |          |
|-----------------------|----------|
| Adjustment Strategy   | Standard |
| B0 Shim               | Tune up  |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

**System - Adjust Volume**

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

**System - pTx**

|              |          |
|--------------|----------|
| B1 Shim      | TrueForm |
| LR Balancing | Off      |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 123.193644 MHz |
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

**Physio - Signal**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 4560.0 ms |
| Concatenations  | 1         |

**Physio - Cardiac**

|                    |          |
|--------------------|----------|
| Fat-Water Contrast | Standard |
| Magn. Preparation  | None     |
| Dark Blood         | Off      |
| FOV Read           | 220 mm   |
| FOV Phase          | 100.0 %  |
| Phase Resolution   | 80 %     |
| Motion Correction  | None     |

**Physio - PACE**

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

**Inline - Subtraction**

|                      |      |
|----------------------|------|
| Subtract             | Off  |
| Measurements         | 1    |
| StdDev               | Off  |
| Motion Correction    | None |
| Save Original Images | On   |

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

|                       |              |
|-----------------------|--------------|
| Sequence Name         | tse_rr       |
| Dimension             | 2D           |
| RF Pulse Type         | Low SAR      |
| Gradient Mode         | Normal       |
| Flow Compensation     | Read         |
| Bandwidth             | 260 Hz/Px    |
| Echo Spacing          | 10.5 ms      |
| Free Echo Spacing     | Off          |
| Define                | Turbo Factor |
| Turbo Factor          | 19           |
| Echo Trains per Slice | 15           |

**Sequence - Part 2**

|                          |           |
|--------------------------|-----------|
| Introduction             | On        |
| Phase Correction         | Automatic |
| Compensate T2 Decay      | Off       |
| Fast Mode                | Off       |
| WARP                     | Off       |
| Red. EC Sensitivity      | Off       |
| Acoustic noise reduction | Off       |

**Sequence - Part 2**

|                     |      |
|---------------------|------|
| Reduce Motion Sens. | On   |
| Motion Correction   | None |

**Sequence - Assistant**

|                |            |
|----------------|------------|
| SAR Assistant  | Flip Angle |
| Min Flip Angle | 130 deg    |
| Allowed Delay  | 60 s       |