

**Table of contents**

\USER

Development

Dr. Vachon-Pressseau

vaso-test-2022-12-08

localizer  
b1map\_tra\_p2  
anat-T1w\_acq-mp2rage\_0.8mm\_CS\_wip925  
rslh\_ep3d\_vaso\_fullbrain\_0.8x0.8x0.9  
rslh\_ep3d\_vaso\_task  
rslh\_ep3d\_vaso\_task  
CR\_tfl\_MTboost

\\USER\Development\Dr. Vachon-Pressseau\vaso-test-2022-12-08\localizer

TA: 0:15 PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

**Properties**

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

**Routine**

|                    |                   |
|--------------------|-------------------|
| Slice group        | 1                 |
| Slices             | 1                 |
| Dist. factor       | 20 %              |
| Position           | Isocenter         |
| Orientation        | Sagittal          |
| Phase enc. dir.    | A >> P            |
| Slice group        | 2                 |
| Slices             | 1                 |
| Dist. factor       | 20 %              |
| Position           | Isocenter         |
| Orientation        | Transversal       |
| Phase enc. dir.    | A >> P            |
| Slice group        | 3                 |
| Slices             | 1                 |
| Dist. factor       | 20 %              |
| Position           | Isocenter         |
| Orientation        | Coronal           |
| Phase enc. dir.    | R >> L            |
| AutoAlign          | ---               |
| Phase oversampling | 0 %               |
| FoV read           | 250 mm            |
| FoV phase          | 100.0 %           |
| Slice thickness    | 5.0 mm            |
| TR                 | 8.6 ms            |
| TE                 | 3.69 ms           |
| Averages           | 2                 |
| Concatenations     | 3                 |
| Filter             | Elliptical filter |
| Coil elements      | A32               |

**Contrast - Common**

|                   |         |
|-------------------|---------|
| TR                | 8.6 ms  |
| TE                | 3.69 ms |
| TD                | 0 ms    |
| MTC               | Off     |
| Magn. preparation | None    |
| Flip angle        | 20 deg  |
| Fat suppr.        | None    |
| Water suppr.      | None    |
| SWI               | Off     |

**Contrast - Dynamic**

|                |            |
|----------------|------------|
| Averages       | 2          |
| Averaging mode | Short term |
| Reconstruction | Magnitude  |
| Measurements   | 1          |

**Contrast - Dynamic**

|                 |                  |
|-----------------|------------------|
| Multiple series | Each measurement |
|-----------------|------------------|

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 250 mm  |
| FoV phase             | 100.0 % |
| Slice thickness       | 5.0 mm  |
| Base resolution       | 256     |
| Phase resolution      | 100 %   |
| Phase partial Fourier | Off     |
| Interpolation         | On      |

**Resolution - iPAT**

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

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

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

**Geometry - Common**

|                  |             |
|------------------|-------------|
| Slice group      | 1           |
| Slices           | 1           |
| Dist. factor     | 20 %        |
| Position         | Isocenter   |
| Orientation      | Sagittal    |
| Phase enc. dir.  | A >> P      |
| Slice group      | 2           |
| Slices           | 1           |
| Dist. factor     | 20 %        |
| Position         | Isocenter   |
| Orientation      | Transversal |
| Phase enc. dir.  | A >> P      |
| Slice group      | 3           |
| Slices           | 1           |
| Dist. factor     | 20 %        |
| Position         | Isocenter   |
| Orientation      | Coronal     |
| Phase enc. dir.  | R >> L      |
| FoV read         | 250 mm      |
| FoV phase        | 100.0 %     |
| Slice thickness  | 5.0 mm      |
| TR               | 8.6 ms      |
| Multi-slice mode | Sequential  |
| Series           | Interleaved |
| Concatenations   | 3           |

**Geometry - AutoAlign**

|                 |             |
|-----------------|-------------|
| Slice group     | 1           |
| Position        | Isocenter   |
| Orientation     | Sagittal    |
| Phase enc. dir. | A >> P      |
| Slice group     | 2           |
| Position        | Isocenter   |
| Orientation     | Transversal |

**Geometry - AutoAlign**

|                     |           |
|---------------------|-----------|
| Phase enc. dir.     | A >> P    |
| Slice group         | 3         |
| Position            | Isocenter |
| Orientation         | Coronal   |
| Phase enc. dir.     | R >> L    |
| AutoAlign           | ---       |
| Initial Position    | Isocenter |
| L                   | 0.0 mm    |
| P                   | 0.0 mm    |
| H                   | 0.0 mm    |
| Initial Rotation    | 0.00 deg  |
| Initial Orientation | Sagittal  |

**Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**Geometry - Tim CT**

|                 |         |
|-----------------|---------|
| Tim CT mode     | Off     |
| Slices          | 1       |
| Slice thickness | 5.0 mm  |
| Dist. factor    | 20 %    |
| FoV read        | 250 mm  |
| FoV phase       | 100.0 % |
| Segments        | 1       |

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

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

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.200243 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

**Physio - Signal1**

|                 |        |
|-----------------|--------|
| 1st Signal/Mode | None   |
| TR              | 8.6 ms |
| Concatenations  | 3      |
| Segments        | 1      |

**Physio - Cardiac**

|                   |         |
|-------------------|---------|
| Tagging           | None    |
| Magn. preparation | None    |
| Fat suppr.        | None    |
| Dark blood        | Off     |
| FoV read          | 250 mm  |
| FoV phase         | 100.0 % |
| Phase resolution  | 100 %   |

**Physio - PACE**

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

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | Off |

**Inline - MapIt**

|                      |         |
|----------------------|---------|
| Save original images | On      |
| MapIt                | None    |
| Flip angle           | 20 deg  |
| Measurements         | 1       |
| Contrasts            | 1       |
| TR                   | 8.6 ms  |
| TE                   | 3.69 ms |

**Sequence - Part 1**

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

**Sequence - Part 1**

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

**Sequence - Part 2**

|                          |            |
|--------------------------|------------|
| Segments                 | 1          |
| Acoustic noise reduction | Active     |
| RF pulse type            | Normal     |
| Gradient mode            | Normal     |
| Excitation               | Slice-sel. |
| RF spoiling              | On         |

**Sequence - Nuclei**

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

**Sequence - Assistant**

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

\\USER\Development\Dr. Vachon-Pressseau\vaso-test-2022-12-08\b1map\_tra\_p2

TA: 0:20 PM: REF Voxel size: 4.0×4.0×1.5 mmPAT: 2 Rel. SNR: 1.00 : tfl

**Properties**

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

**Routine**

|                    |                   |
|--------------------|-------------------|
| Slice group        | 1                 |
| Slices             | 50                |
| Dist. factor       | 100 %             |
| Position           | R2.4 A5.4 F1.8 mm |
| Orientation        | Transversal       |
| Phase enc. dir.    | A >> P            |
| AutoAlign          | ---               |
| Phase oversampling | 0 %               |
| FoV read           | 256 mm            |
| FoV phase          | 100.0 %           |
| Slice thickness    | 1.5 mm            |
| TR                 | 9450.0 ms         |
| TE                 | 2.38 ms           |
| Averages           | 1                 |
| Concatenations     | 1                 |
| Filter             | None              |
| Coil elements      | A32               |

**Contrast - Common**

|                   |           |
|-------------------|-----------|
| TR                | 9450.0 ms |
| TE                | 2.38 ms   |
| Magn. preparation | None      |
| Flip angle        | 10 deg    |
| Fat suppr.        | None      |
| Water suppr.      | None      |

**Contrast - Dynamic**

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

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 256 mm  |
| FoV phase             | 100.0 % |
| Slice thickness       | 1.5 mm  |
| Base resolution       | 64      |
| Phase resolution      | 100 %   |
| Phase partial Fourier | Off     |
| Interpolation         | Off     |

**Resolution - iPAT**

|                     |            |
|---------------------|------------|
| PAT mode            | GRAPPA     |
| Accel. factor PE    | 2          |
| Ref. lines PE       | 16         |
| Reference scan mode | Integrated |

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

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

**Geometry - Common**

|                  |                   |
|------------------|-------------------|
| Slice group      | 1                 |
| Slices           | 50                |
| Dist. factor     | 100 %             |
| Position         | R2.4 A5.4 F1.8 mm |
| Orientation      | Transversal       |
| Phase enc. dir.  | A >> P            |
| FoV read         | 256 mm            |
| FoV phase        | 100.0 %           |
| Slice thickness  | 1.5 mm            |
| TR               | 9450.0 ms         |
| Multi-slice mode | Interleaved       |
| Series           | Interleaved       |
| Concatenations   | 1                 |

**Geometry - AutoAlign**

|                     |                   |
|---------------------|-------------------|
| Slice group         | 1                 |
| Position            | R2.4 A5.4 F1.8 mm |
| Orientation         | Transversal       |
| Phase enc. dir.     | A >> P            |
| AutoAlign           | ---               |
| Initial Position    | R2.4 A5.4 F1.8    |
| R                   | 2.4 mm            |
| A                   | 5.4 mm            |
| F                   | 1.8 mm            |
| Initial Rotation    | 0.00 deg          |
| Initial Orientation | Transversal       |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

|              |          |
|--------------|----------|
| B0 Shim mode | Standard |
|--------------|----------|

**System - Adjustments**

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

**System - Adjust Volume**

|             |                   |
|-------------|-------------------|
| Position    | R2.4 A5.4 F1.8 mm |
| Orientation | Transversal       |
| Rotation    | 0.00 deg          |
| A >> P      | 256 mm            |
| R >> L      | 256 mm            |
| F >> H      | 149 mm            |
| Reset       | Off               |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.200243 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Composing**

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | Off |

**Sequence - Part 1**

|                  |             |
|------------------|-------------|
| Introduction     | Off         |
| Dimension        | 2D          |
| Asymmetric echo  | Allowed     |
| Flow comp.       | No          |
| Multi-slice mode | Interleaved |
| Echo spacing     | 4.7 ms      |
| Bandwidth        | 490 Hz/Px   |

**Sequence - Part 2**

|               |            |
|---------------|------------|
| RF pulse type | Fast       |
| Gradient mode | Normal     |
| Excitation    | Slice-sel. |
| RF spoiling   | On         |
| Turbo factor  | 64         |

**Sequence - Assistant**

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

\\USER\Development\Dr. Vachon-Pressseau\vaso-test-2022-12-08\anat-T1w\_acq-mp2rage\_0.8mm\_C  
S\_wip925

TA: 4:59 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 0.7 Rel. SNR: 1.00 : WIP\_cmp

### Properties

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

### Routine

|                    |                      |
|--------------------|----------------------|
| Slab group         | 1                    |
| Slabs              | 1                    |
| Dist. factor       | 50 %                 |
| Position           | R2.1 A16.8 H4.0 mm   |
| Orientation        | Sagittal             |
| Phase enc. dir.    | A >> P               |
| AutoAlign          | ---                  |
| Phase oversampling | 0 %                  |
| Slice oversampling | 0.0 %                |
| Slices per slab    | 224                  |
| FoV read           | 240 mm               |
| FoV phase          | 94.4 %               |
| Slice thickness    | 0.83 mm              |
| TR                 | 5000.0 ms            |
| TE                 | 2.89 ms              |
| Averages           | 1                    |
| Concatenations     | 1                    |
| Filter             | Distortion Corr.(3D) |
| Coil elements      | A32                  |

### Contrast - Common

|                   |             |
|-------------------|-------------|
| TR                | 5000.0 ms   |
| TE                | 2.89 ms     |
| Magn. preparation | Non-sel. IR |
| TI 1              | 900 ms      |
| TI 2              | 2750 ms     |
| Flip angle 1      | 4 deg       |
| Flip angle 2      | 5 deg       |
| Fat suppr.        | None        |
| Water suppr.      | None        |

### Contrast - Dynamic

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

### Resolution - Common

|                  |         |
|------------------|---------|
| FoV read         | 240 mm  |
| FoV phase        | 94.4 %  |
| Slice thickness  | 0.83 mm |
| Base resolution  | 288     |
| Phase resolution | 100 %   |
| Slice resolution | 100 %   |

### Resolution - Common

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

### Resolution - iPAT

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

### Resolution - Filter Image

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

### Resolution - Filter Rawdata

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

### Geometry - Common

|                    |                    |
|--------------------|--------------------|
| Slab group         | 1                  |
| Slabs              | 1                  |
| Dist. factor       | 50 %               |
| Position           | R2.1 A16.8 H4.0 mm |
| Orientation        | Sagittal           |
| Phase enc. dir.    | A >> P             |
| Slice oversampling | 0.0 %              |
| Slices per slab    | 224                |
| FoV read           | 240 mm             |
| FoV phase          | 94.4 %             |
| Slice thickness    | 0.83 mm            |
| TR                 | 5000.0 ms          |
| Multi-slice mode   | Single shot        |
| Series             | Interleaved        |
| Concatenations     | 1                  |

### Geometry - AutoAlign

|                     |                    |
|---------------------|--------------------|
| Slab group          | 1                  |
| Position            | R2.1 A16.8 H4.0 mm |
| Orientation         | Sagittal           |
| Phase enc. dir.     | A >> P             |
| AutoAlign           | ---                |
| Initial Position    | R2.1 A16.8 H4.0    |
| R                   | 2.1 mm             |
| A                   | 16.8 mm            |
| H                   | 4.0 mm             |
| Initial Rotation    | 0.00 deg           |
| Initial Orientation | Sagittal           |

### Geometry - Navigator

### Geometry - Tim Planning Suite

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

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

|               |                    |
|---------------|--------------------|
| ! Position    | L0.0 A2.2 H10.4 mm |
| ! Orientation | Sagittal           |
| ! Rotation    | 30.52 deg          |
| ! A >> P      | 199 mm             |
| ! F >> H      | 139 mm             |
| ! R >> L      | 150 mm             |
| Reset         | Off                |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.200243 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

**Physio - Signal1**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 5000.0 ms |
| Concatenations  | 1         |

**Physio - Cardiac**

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| TI 1              | 900 ms      |
| TI 2              | 2750 ms     |
| Fat suppr.        | None        |
| Dark blood        | Off         |
| FoV read          | 240 mm      |
| FoV phase         | 94.4 %      |
| Phase resolution  | 100 %       |

**Physio - PACE**

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

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Composing**

|                   |     |
|-------------------|-----|
| Inline Composing  | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | Off |

**Inline - Maplt**

|                      |           |
|----------------------|-----------|
| Save original images | On        |
| Maplt                | None      |
| Flip angle 1         | 4 deg     |
| Flip angle 2         | 5 deg     |
| Measurements         | 1         |
| Contrasts            | 1         |
| TR                   | 5000.0 ms |
| TE                   | 2.89 ms   |

**Sequence - Part 1**

|                     |             |
|---------------------|-------------|
| Introduction        | On          |
| Dimension           | 3D          |
| Elliptical scanning | Off         |
| Reordering          | Linear      |
| Asymmetric echo     | Off         |
| Contrasts           | 1           |
| Flow comp.          | No          |
| Multi-slice mode    | Single shot |
| Echo spacing        | 6.7 ms      |
| Bandwidth           | 240 Hz/Px   |

**Sequence - Part 2**

|                         |          |
|-------------------------|----------|
| RF pulse type           | Fast     |
| Gradient mode           | Fast     |
| Excitation              | Non-sel. |
| RF spoiling             | On       |
| Incr. Gradient spoiling | Off      |
| Turbo factor            | 224      |

**Sequence - Special**

|                     |          |
|---------------------|----------|
| Sparse Sampling     | On       |
| US                  | 4.0 x    |
| Samples/TR          | 200      |
| Density             | 0.50     |
| Jitter Radius       | 1.2      |
| Reference Scan      | External |
| No. Ref-Lines       | 32       |
| Centric             | Off      |
| Virtual Coils       | Off      |
| Shift Inv Pulse     | 0 Hz     |
| No. Iterations      | 15       |
| CSM RO Resolution   | 0        |
| Regularisation INV1 | 0.00100  |
| Regularisation INV2 | 0.00100  |
| Uniform             | On       |
| Denosed UNI         | On       |
| FLAWS               | Off      |
| FLAWS-hc            | Off      |
| FLAWS-hc inv.       | Off      |
| Division image      | Off      |
| T1 Map              | Off      |



**Sequence - Special**

|                |                    |
|----------------|--------------------|
| Synthetic T1 0 | 0 ms               |
| Synthetic T1 1 | 0 ms               |
| Denoise Lambda | 7                  |
| Scaling        | -1 10 <sup>^</sup> |
| Echo Averaging | Off                |
| FID Monitoring | Off                |

**Sequence - Assistant**

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

|   |
|---|
| \\USER\Development\Dr. Vachon-Pressseau\vaso-test-2022-12-08\rslh_ep3d_vaso_fullbrain_0.8x0.8x0.9 |
| TA: 20:22 PM: REF Voxel size: 0.8x0.8x0.9 mmPAT: 6 Rel. SNR: 1.00 : d238999c                      |

**Properties**

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

**Routine**

|                  |                      |
|------------------|----------------------|
| Slab group       | 1                    |
| Slabs            | 1                    |
| Position         | R2.8 A5.6 H15.6 mm   |
| Orientation      | T > C-12.0           |
| Phase enc. dir.  | A >> P               |
| AutoAlign        | ---                  |
| Slab Scale       | -10 %                |
| Slices per slab  | 114                  |
| FoV read         | 177 mm               |
| FoV phase        | 109.3 %              |
| Slice thickness  | 0.90 mm              |
| TR 1             | 65.2 ms              |
| TR 2             | 8106 ms              |
| TE 1             | 22.60 ms             |
| Averages         | 1                    |
| Multi-echo Shots | 1                    |
| Filter           | Distortion Corr.(3D) |
| Coil elements    | A32                  |

**Contrast - Common**

|                    |             |
|--------------------|-------------|
| TR 1               | 65.2 ms     |
| TR 2               | 8106 ms     |
| TE 1               | 22.60 ms    |
| Multi-echo spacing | 61.73 ms    |
| Magn. preparation  | Non-sel. IR |
| TI 1               | 2485.6 ms   |
| TI 2               | 6202 ms     |
| Flip angle         | 33 deg      |
| Fat suppr.         | None        |
| Magn. Prep. Shots  | 1           |

**Contrast - Dynamic**

|                   |           |
|-------------------|-----------|
| Averages          | 1         |
| Averaging mode    | Long term |
| Reconstruction    | Magnitude |
| Measurements      | 150       |
| Pause after meas. | 0.0 s     |

**Resolution - Common**

|                  |         |
|------------------|---------|
| FoV read         | 177 mm  |
| FoV phase        | 109.3 % |
| Slice thickness  | 0.90 mm |
| Base resolution  | 214     |
| Phase resolution | 100 %   |
| Slice resolution | 100 %   |

**Resolution - Common**

|                       |     |
|-----------------------|-----|
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |
| Interpolation         | Off |

**Resolution - iPAT**

|                     |              |
|---------------------|--------------|
| PAT mode            | CAIPIRINHA   |
| Acc. factor PE      | 3            |
| Ref. lines PE       | 45           |
| Acc. factor 3D      | 2            |
| Ref. lines 3D       | 24           |
| CAIPI 3D Shift      | 1            |
| Reference Scan Mode | GRE/separate |
| CAIPIRINHA mode     | Free         |

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

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

**Geometry - Common**

|                  |                    |
|------------------|--------------------|
| Slab group       | 1                  |
| Slabs            | 1                  |
| Position         | R2.8 A5.6 H15.6 mm |
| Orientation      | T > C-12.0         |
| Phase enc. dir.  | A >> P             |
| Slab Scale       | -10 %              |
| Slices per slab  | 114                |
| FoV read         | 177 mm             |
| FoV phase        | 109.3 %            |
| Slice thickness  | 0.90 mm            |
| TR 1             | 65.2 ms            |
| TR 2             | 8106 ms            |
| Multi-slice mode | Interleaved        |
| Series           | Ascending          |
| Multi-echo Shots | 1                  |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slab group          | 1                  |
| Position            | R2.8 A5.6 H15.6 mm |
| Orientation         | T > C-12.0         |
| Phase enc. dir.     | A >> P             |
| AutoAlign           | ---                |
| Initial Position    | R2.8 A5.6 H15.6    |
| R                   | 2.8 mm             |
| A                   | 5.6 mm             |
| H                   | 15.6 mm            |
| Initial Rotation    | 0.00 deg           |
| Initial Orientation | T > C              |
| T > C               | -12.0              |
| > S                 | 0.0                |

**Geometry - Saturation**

|                 |          |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr.      | None     |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

|             |                    |
|-------------|--------------------|
| Position    | R2.8 A5.6 H15.6 mm |
| Orientation | T > C-12.0         |
| Rotation    | 90.00 deg          |
| R >> L      | 177 mm             |
| A >> P      | 194 mm             |
| F >> H      | 103 mm             |
| Reset       | Off                |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.200243 MHz |
| Correction factor   | 1              |
| Gain                | Low            |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

**Sequence - Part 1**

|                  |             |
|------------------|-------------|
| Introduction     | On          |
| Dimension        | 3D          |
| Reordering       | Linear      |
| Asymmetric echo  | Off         |
| Contrasts        | 1           |
| Multi-slice mode | Interleaved |
| Echo spacing     | 1.05 ms     |
| Bandwidth        | 1062 Hz/Px  |

**Sequence - Part 2**

|               |        |
|---------------|--------|
| EPI factor    | 58     |
| Segmentation  | 1      |
| RF pulse type | Normal |
| Gradient mode | Fast   |

**Sequence - Part 2**

|              |           |
|--------------|-----------|
| Excitation   | Slab-sel. |
| RF spoiling  | On        |
| Turbo factor | 57        |

**Sequence - Special**

|                      |            |
|----------------------|------------|
| PATRef FA            | 12 deg     |
| RF duration          | 1680 us    |
| RF BWT product       | 25         |
| Ernst T1             | 2500 ms    |
| PATRef prep. shots   | 10         |
| Volume dummy shots   | 0          |
| Dummy Measurements   | 0          |
| CHECK FLIP ANGLE!    | On         |
| Invert PE            | Off        |
| Min. TE if PF        | On         |
| Echo Time Shift      | On         |
| Ramp Sampling        | On         |
| NORDIC               | Off        |
| Water Exc.           | -none-     |
| External PC          | per Series |
| EPI rise time factor | 1.10       |
| Mosaic DICOMs        | On         |
| Modify Ice Config    | Off        |
| Inversion Delay      | 650 ms     |
| Relaxation Delay     | 0 ms       |
| Var. FA /MAGEC       | 4          |

**Sequence - Assistant**

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

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TA: 0:42 PM: REF Voxel size: 0.8×0.8×0.9 mmPAT: 3 Rel. SNR: 1.00 : d238999c

**Properties**

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

**Routine**

|                  |                      |
|------------------|----------------------|
| Slab group       | 1                    |
| Slabs            | 1                    |
| Position         | R6.7 P14.5 H49.4 mm  |
| Orientation      | T > C-17.7           |
| Phase enc. dir.  | A >> P               |
| AutoAlign        | ---                  |
| Slab Scale       | -10 %                |
| Slices per slab  | 24                   |
| FoV read         | 150 mm               |
| FoV phase        | 95.7 %               |
| Slice thickness  | 0.90 mm              |
| TR 1             | 52.6 ms              |
| TR 2             | 3634 ms              |
| TE 1             | 18.30 ms             |
| Averages         | 1                    |
| Multi-echo Shots | 1                    |
| Filter           | Distortion Corr.(3D) |
| Coil elements    | A32                  |

**Contrast - Common**

|                    |             |
|--------------------|-------------|
| TR 1               | 52.6 ms     |
| TR 2               | 3634 ms     |
| TE 1               | 18.30 ms    |
| Multi-echo spacing | 48.36 ms    |
| Magn. preparation  | Non-sel. IR |
| TI 1               | 1291.2 ms   |
| TI 2               | 2553.6 ms   |
| Flip angle         | 60 deg      |
| Fat suppr.         | Fat sat.    |
| Magn. Prep. Shots  | 1           |

**Contrast - Dynamic**

|                     |           |
|---------------------|-----------|
| Averages            | 1         |
| Averaging mode      | Long term |
| Reconstruction      | Magnitude |
| Measurements        | 10        |
| Pause after meas. 1 | 0.0 s     |
| Pause after meas. 2 | 0.0 s     |
| Pause after meas. 3 | 0.0 s     |
| Pause after meas. 4 | 0.0 s     |
| Pause after meas. 5 | 0.0 s     |
| Pause after meas. 6 | 0.0 s     |
| Pause after meas. 7 | 0.0 s     |
| Pause after meas. 8 | 0.0 s     |
| Pause after meas. 9 | 0.0 s     |

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 150 mm  |
| FoV phase             | 95.7 %  |
| Slice thickness       | 0.90 mm |
| Base resolution       | 184     |
| Phase resolution      | 100 %   |
| Slice resolution      | 100 %   |
| Phase partial Fourier | 6/8     |
| Slice partial Fourier | Off     |
| Interpolation         | Off     |

**Resolution - iPAT**

|                     |              |
|---------------------|--------------|
| PAT mode            | CAIPIRINHA   |
| Acc. factor PE      | 3            |
| Ref. lines PE       | 45           |
| Acc. factor 3D      | 1            |
| Ref. lines 3D       | 16           |
| CAIPI 3D Shift      | 0            |
| Reference Scan Mode | GRE/separate |
| CAIPIRINHA mode     | Free         |

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

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

**Geometry - Common**

|                  |                     |
|------------------|---------------------|
| Slab group       | 1                   |
| Slabs            | 1                   |
| Position         | R6.7 P14.5 H49.4 mm |
| Orientation      | T > C-17.7          |
| Phase enc. dir.  | A >> P              |
| Slab Scale       | -10 %               |
| Slices per slab  | 24                  |
| FoV read         | 150 mm              |
| FoV phase        | 95.7 %              |
| Slice thickness  | 0.90 mm             |
| TR 1             | 52.6 ms             |
| TR 2             | 3634 ms             |
| Multi-slice mode | Interleaved         |
| Series           | Ascending           |
| Multi-echo Shots | 1                   |

**Geometry - AutoAlign**

|                  |                     |
|------------------|---------------------|
| Slab group       | 1                   |
| Position         | R6.7 P14.5 H49.4 mm |
| Orientation      | T > C-17.7          |
| Phase enc. dir.  | A >> P              |
| AutoAlign        | ---                 |
| Initial Position | R6.7 P14.5 H49.4    |
| R                | 6.7 mm              |
| P                | 14.5 mm             |
| H                | 49.4 mm             |

**Geometry - AutoAlign**

|                     |          |
|---------------------|----------|
| Initial Rotation    | 0.00 deg |
| Initial Orientation | T > C    |
| T > C               | -17.7    |
| > S                 | 0.0      |

**Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

|             |                     |
|-------------|---------------------|
| Position    | R6.7 P14.5 H49.4 mm |
| Orientation | T > C-17.7          |
| Rotation    | 0.00 deg            |
| A >> P      | 144 mm              |
| R >> L      | 150 mm              |
| F >> H      | 22 mm               |
| Reset       | Off                 |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.200243 MHz |
| Correction factor   | 1              |
| Gain                | Low            |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

**Sequence - Part 1**

|                  |             |
|------------------|-------------|
| Introduction     | On          |
| Dimension        | 3D          |
| Reordering       | Linear      |
| Asymmetric echo  | Off         |
| Contrasts        | 1           |
| Multi-slice mode | Interleaved |
| Echo spacing     | 1.08 ms     |
| Bandwidth        | 1046 Hz/Px  |

**Sequence - Part 2**

|               |           |
|---------------|-----------|
| EPI factor    | 44        |
| Segmentation  | 1         |
| RF pulse type | Normal    |
| Gradient mode | Fast      |
| Excitation    | Slab-sel. |
| RF spoiling   | On        |
| Turbo factor  | 24        |

**Sequence - Special**

|                      |            |
|----------------------|------------|
| PATRef FA            | 3 deg      |
| RF duration          | 2540 us    |
| RF BWT product       | 15         |
| Ernst T1             | 2500 ms    |
| PATRef prep. shots   | 10         |
| Volume dummy shots   | 0          |
| Dummy Measurements   | 0          |
| Invert PE            | Off        |
| Min. TE if PF        | On         |
| Echo Time Shift      | On         |
| Ramp Sampling        | On         |
| NORDIC               | Off        |
| Water Exc.           | -none-     |
| External PC          | per Series |
| Saturation RF        | per Shot   |
| EPI rise time factor | 1.10       |
| Mosaic DICOMs        | On         |
| Modify Ice Config    | Off        |
| Inversion Delay      | 650 ms     |
| Relaxation Delay     | 0 ms       |
| Var. FA /MAGEC       | 4          |

**Sequence - Assistant**

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

\\USER\Development\Dr. Vachon-Pressseau\vaso-test-2022-12-08\rslh\_ep3d\_vaso\_task

TA: 5:00 PM: REF Voxel size: 0.8×0.8×0.9 mmPAT: 3 Rel. SNR: 1.00 : d238999c

**Properties**

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

**Routine**

|                  |                      |
|------------------|----------------------|
| Slab group       | 1                    |
| Slabs            | 1                    |
| Position         | R6.7 P14.5 H49.4 mm  |
| Orientation      | T > C-17.7           |
| Phase enc. dir.  | A >> P               |
| AutoAlign        | ---                  |
| Slab Scale       | -10 %                |
| Slices per slab  | 24                   |
| FoV read         | 150 mm               |
| FoV phase        | 95.7 %               |
| Slice thickness  | 0.90 mm              |
| TR 1             | 52.6 ms              |
| TR 2             | 3634 ms              |
| TE 1             | 18.30 ms             |
| Averages         | 1                    |
| Multi-echo Shots | 1                    |
| Filter           | Distortion Corr.(3D) |
| Coil elements    | A32                  |

**Contrast - Common**

|                    |             |
|--------------------|-------------|
| TR 1               | 52.6 ms     |
| TR 2               | 3634 ms     |
| TE 1               | 18.30 ms    |
| Multi-echo spacing | 48.36 ms    |
| Magn. preparation  | Non-sel. IR |
| TI 1               | 1291.2 ms   |
| TI 2               | 2553.6 ms   |
| Flip angle         | 60 deg      |
| Fat suppr.         | Fat sat.    |
| Magn. Prep. Shots  | 1           |

**Contrast - Dynamic**

|                   |           |
|-------------------|-----------|
| Averages          | 1         |
| Averaging mode    | Long term |
| Reconstruction    | Magnitude |
| Measurements      | 81        |
| Pause after meas. | 0.0 s     |

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 150 mm  |
| FoV phase             | 95.7 %  |
| Slice thickness       | 0.90 mm |
| Base resolution       | 184     |
| Phase resolution      | 100 %   |
| Slice resolution      | 100 %   |
| Phase partial Fourier | 6/8     |

**Resolution - Common**

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

**Resolution - iPAT**

|                     |              |
|---------------------|--------------|
| PAT mode            | CAIPIRINHA   |
| Acc. factor PE      | 3            |
| Ref. lines PE       | 45           |
| Acc. factor 3D      | 1            |
| Ref. lines 3D       | 16           |
| CAIPI 3D Shift      | 0            |
| Reference Scan Mode | GRE/separate |
| CAIPIRINHA mode     | Free         |

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

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

**Geometry - Common**

|                  |                     |
|------------------|---------------------|
| Slab group       | 1                   |
| Slabs            | 1                   |
| Position         | R6.7 P14.5 H49.4 mm |
| Orientation      | T > C-17.7          |
| Phase enc. dir.  | A >> P              |
| Slab Scale       | -10 %               |
| Slices per slab  | 24                  |
| FoV read         | 150 mm              |
| FoV phase        | 95.7 %              |
| Slice thickness  | 0.90 mm             |
| TR 1             | 52.6 ms             |
| TR 2             | 3634 ms             |
| Multi-slice mode | Interleaved         |
| Series           | Ascending           |
| Multi-echo Shots | 1                   |

**Geometry - AutoAlign**

|                     |                     |
|---------------------|---------------------|
| Slab group          | 1                   |
| Position            | R6.7 P14.5 H49.4 mm |
| Orientation         | T > C-17.7          |
| Phase enc. dir.     | A >> P              |
| AutoAlign           | ---                 |
| Initial Position    | R6.7 P14.5 H49.4    |
| R                   | 6.7 mm              |
| P                   | 14.5 mm             |
| H                   | 49.4 mm             |
| Initial Rotation    | 0.00 deg            |
| Initial Orientation | T > C               |
| T > C               | -17.7               |
| > S                 | 0.0                 |

**Geometry - Saturation**

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

**Geometry - Saturation**

|            |          |
|------------|----------|
| Fat suppr. | Fat sat. |
|------------|----------|

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

|             |                     |
|-------------|---------------------|
| Position    | R6.7 P14.5 H49.4 mm |
| Orientation | T > C-17.7          |
| Rotation    | 0.00 deg            |
| A >> P      | 144 mm              |
| R >> L      | 150 mm              |
| F >> H      | 22 mm               |
| Reset       | Off                 |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.200243 MHz |
| Correction factor   | 1              |
| Gain                | Low            |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

**Sequence - Part 1**

|                  |             |
|------------------|-------------|
| Introduction     | On          |
| Dimension        | 3D          |
| Reordering       | Linear      |
| Asymmetric echo  | Off         |
| Contrasts        | 1           |
| Multi-slice mode | Interleaved |
| Echo spacing     | 1.08 ms     |
| Bandwidth        | 1046 Hz/Px  |

**Sequence - Part 2**

|               |           |
|---------------|-----------|
| EPI factor    | 44        |
| Segmentation  | 1         |
| RF pulse type | Normal    |
| Gradient mode | Fast      |
| Excitation    | Slab-sel. |

**Sequence - Part 2**

|              |    |
|--------------|----|
| RF spoiling  | On |
| Turbo factor | 24 |

**Sequence - Special**

|                      |            |
|----------------------|------------|
| PATRef FA            | 3 deg      |
| RF duration          | 2540 us    |
| RF BWT product       | 15         |
| Ernst T1             | 2500 ms    |
| PATRef prep. shots   | 10         |
| Volume dummy shots   | 0          |
| Dummy Measurements   | 0          |
| Invert PE            | Off        |
| Min. TE if PF        | On         |
| Echo Time Shift      | On         |
| Ramp Sampling        | On         |
| NORDIC               | Off        |
| Water Exc.           | -none-     |
| External PC          | per Series |
| Saturation RF        | per Shot   |
| EPI rise time factor | 1.10       |
| Mosaic DICOMs        | On         |
| Modify Ice Config    | Off        |
| Inversion Delay      | 650 ms     |
| Relaxation Delay     | 0 ms       |
| Var. FA /MAGEC       | 4          |

**Sequence - Assistant**

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

\\USER\Development\Dr. Vachon-Pressseau\vaso-test-2022-12-08\CR\_tfl\_MTboost

TA: 8:37 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : tfl

**Properties**

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

**Routine**

|                    |                      |
|--------------------|----------------------|
| Slab group         | 1                    |
| Slabs              | 1                    |
| Dist. factor       | 50 %                 |
| Position           | R2.1 A16.8 H4.0 mm   |
| Orientation        | Sagittal             |
| Phase enc. dir.    | A >> P               |
| AutoAlign          | ---                  |
| Phase oversampling | 0 %                  |
| Slice oversampling | 0.0 %                |
| Slices per slab    | 224                  |
| FoV read           | 240 mm               |
| FoV phase          | 93.8 %               |
| Slice thickness    | 0.83 mm              |
| TR                 | 200.0 ms             |
| TE                 | 2.89 ms              |
| Averages           | 1                    |
| Concatenations     | 1                    |
| Filter             | Distortion Corr.(3D) |
| Coil elements      | A32                  |

**Contrast - Common**

|                   |          |
|-------------------|----------|
| TR                | 200.0 ms |
| TE                | 2.89 ms  |
| Magn. preparation | None     |
| Flip angle        | 5.0 deg  |
| Fat suppr.        | None     |
| Water suppr.      | None     |

**Contrast - Dynamic**

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

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 240 mm  |
| FoV phase             | 93.8 %  |
| Slice thickness       | 0.83 mm |
| Base resolution       | 288     |
| Phase resolution      | 100 %   |
| Slice resolution      | 100 %   |
| Phase partial Fourier | Off     |
| Slice partial Fourier | Off     |
| Interpolation         | Off     |

**Resolution - iPAT**

|                     |            |
|---------------------|------------|
| PAT mode            | GRAPPA     |
| Accel. factor PE    | 2          |
| Ref. lines PE       | 32         |
| Accel. factor 3D    | 1          |
| Reference scan mode | Integrated |

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

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

**Geometry - Common**

|                    |                    |
|--------------------|--------------------|
| Slab group         | 1                  |
| Slabs              | 1                  |
| Dist. factor       | 50 %               |
| Position           | R2.1 A16.8 H4.0 mm |
| Orientation        | Sagittal           |
| Phase enc. dir.    | A >> P             |
| Slice oversampling | 0.0 %              |
| Slices per slab    | 224                |
| FoV read           | 240 mm             |
| FoV phase          | 93.8 %             |
| Slice thickness    | 0.83 mm            |
| TR                 | 200.0 ms           |
| Multi-slice mode   | Sequential         |
| Series             | Ascending          |
| Concatenations     | 1                  |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slab group          | 1                  |
| Position            | R2.1 A16.8 H4.0 mm |
| Orientation         | Sagittal           |
| Phase enc. dir.     | A >> P             |
| AutoAlign           | ---                |
| Initial Position    | R2.1 A16.8 H4.0    |
| R                   | 2.1 mm             |
| A                   | 16.8 mm            |
| H                   | 4.0 mm             |
| Initial Rotation    | 0.00 deg           |
| Initial Orientation | Sagittal           |

**Geometry - Navigator****Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

|                  |     |
|------------------|-----|
| Positioning mode | FIX |
| Table position   | H   |



**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

|               |                    |
|---------------|--------------------|
| ! Position    | L0.0 A12.0 F0.9 mm |
| ! Orientation | Transversal        |
| ! Rotation    | 0.00 deg           |
| ! A >> P      | 205 mm             |
| ! R >> L      | 350 mm             |
| ! F >> H      | 163 mm             |
| Reset         | Off                |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.200243 MHz |
| Correction factor   | 1              |
| Gain                | Low            |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

**Physio - Signal1**

|                 |          |
|-----------------|----------|
| 1st Signal/Mode | None     |
| TR              | 200.0 ms |
| Concatenations  | 1        |

**Physio - Cardiac**

|                   |        |
|-------------------|--------|
| Magn. preparation | None   |
| Fat suppr.        | None   |
| Dark blood        | Off    |
| FoV read          | 240 mm |
| FoV phase         | 93.8 % |
| Phase resolution  | 100 %  |

**Physio - PACE**

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

**Inline - Common**

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

**Inline - MIP**

|         |     |
|---------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |

**Inline - MIP**

|                      |     |
|----------------------|-----|
| MIP-Time             | Off |
| Save original images | On  |

**Inline - Composing**

|                   |     |
|-------------------|-----|
| Inline Composing  | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | Off |

**Inline - MapIt**

|                      |          |
|----------------------|----------|
| Save original images | On       |
| MapIt                | None     |
| Flip angle           | 5.0 deg  |
| Measurements         | 1        |
| TR                   | 200.0 ms |
| TE                   | 2.89 ms  |

**Sequence - Part 1**

|                     |            |
|---------------------|------------|
| Introduction        | On         |
| Dimension           | 3D         |
| Elliptical scanning | On         |
| Reordering          | Radial     |
| Asymmetric echo     | Off        |
| Flow comp.          | No         |
| Multi-slice mode    | Sequential |
| Echo spacing        | 7.3 ms     |
| Bandwidth           | 240 Hz/Px  |

**Sequence - Part 2**

|                         |          |
|-------------------------|----------|
| RF pulse type           | Fast     |
| Gradient mode           | Fast     |
| Excitation              | Non-sel. |
| RF spoiling             | On       |
| Incr. Gradient spoiling | On       |
| Turbo factor            | 14       |

**Sequence - Nuclei**

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

**Sequence - Special**

|                          |            |
|--------------------------|------------|
| MTC                      | On         |
| Use Dual Frequency Prep? | Off        |
| Pulse Shape              | Gaussian   |
| Pulse Number             | 3          |
| Each RF Duration         | 12.032 ms  |
| Gap Between Each ihMT RF | 0.50 ms    |
| Freq Offset              | -4000 Hz   |
| MTC Freq Center Offset   | -100 Hz    |
| B1 RMS of ihMT RF        | 2.60 uT    |
| Switch Freq After        | 1 Pulse(s) |
| Boosted Saturation?      | Off        |
| TR of Boost RF Train?    | 80 ms      |
| Boost Factor             | 1          |
| Prep Scan Time           | 60 sec     |

**Sequence - Assistant**

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