

|   |  |
|---|--|
| \USER\SMS_DWI\Regions\Breast\ep2d_diff_tra_spair                        |  |
| TA: 2:52 PM: REF Voxel size: 1.9x1.9x4.0 mmPAT: 2 Rel. SNR: 1.00 : epse |  |

**Properties**

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

**Resolution - iPAT**

|                     |              |
|---------------------|--------------|
| Reference scan mode | EPI/separate |
|---------------------|--------------|

**Resolution - Filter Image**

|                     |     |
|---------------------|-----|
| Distortion Corr.    | On  |
| Mode                | 2D  |
| Prescan Normalize   | Off |
| Dynamic Field Corr. | On  |
| Unfiltered images   | Off |

**Resolution - Filter Rawdata**

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

**Routine**

|                    |  |
|--------------------|--|
| Slice group        | 1  |
| Slices             | 30   |
| Dist. factor       | 25 %   |
| Position           | Isocenter  |
| Orientation        | Transversal  |
| Phase enc. dir.    | P >> A   |
| AutoAlign          | ---  |
| Phase oversampling | 0 %  |
| FoV read           | 340 mm   |
| FoV phase          | 60.0 %   |
| Slice thickness    | 4.0 mm   |
| TR                 | 4900 ms  |
| TE                 | 70.0 ms  |
| Concatenations     | 1  |
| Filter             | Dynamic Field Corr., Distortion Corr.(2D), Elliptical filter |
| Coil elements      | 7BL;7BR;AXL;AXR  |

**Geometry - Common**

|                  |             |
|------------------|-------------|
| Slice group      | 1           |
| Slices           | 30          |
| Dist. factor     | 25 %        |
| Position         | Isocenter   |
| Orientation      | Transversal |
| Phase enc. dir.  | P >> A      |
| FoV read         | 340 mm      |
| FoV phase        | 60.0 %      |
| Slice thickness  | 4.0 mm      |
| TR               | 4900 ms     |
| Multi-slice mode | Interleaved |
| Series           | Interleaved |
| Concatenations   | 1           |

**Geometry - AutoAlign**

|                     |                 |
|---------------------|-----------------|
| Slice group         | 1               |
| Position            | Isocenter       |
| Orientation         | Transversal     |
| Phase enc. dir.     | P >> A          |
| AutoAlign           | ---             |
| Initial Position    | R3.9 A19.9 H0.4 |
| R                   | 3.9 mm          |
| A                   | 19.9 mm         |
| F                   | 0.4 mm          |
| Initial Rotation    | -180.00 deg     |
| Initial Orientation | Transversal     |

**Contrast - Common**

|                   |         |
|-------------------|---------|
| TR                | 4900 ms |
| TE                | 70.0 ms |
| MTC               | Off     |
| Magn. preparation | None    |
| Fat suppr.        | SPAIR   |
| Fat sat. mode     | Strong  |

**Geometry - Saturation**

|               |                      |
|---------------|----------------------|
| Sat. region   | 1                    |
| Thickness     | 150 mm               |
| Position      | R9.8 P135.7 H0.0 mm  |
| Orientation   | Coronal              |
| Sat. region   | 2                    |
| Thickness     | 150 mm               |
| Position      | R14.1 P285.9 H3.5 mm |
| Orientation   | Coronal              |
| Fat sat. mode | Strong               |
| Special sat.  | None                 |

**Geometry - Navigator****Resolution - Common**

|                       |        |
|-----------------------|--------|
| FoV read              | 340 mm |
| FoV phase             | 60.0 % |
| Slice thickness       | 4.0 mm |
| Base resolution       | 180    |
| Phase resolution      | 100 %  |
| Phase partial Fourier | Off    |
| Interpolation         | Off    |

**Geometry - Tim Planning Suite**

|                   |      |
|-------------------|------|
| Set-n-Go Protocol | Off  |
| Table position    | F    |
| Table position    | 9 mm |
| Inline Composing  | Off  |

**Resolution - iPAT**

|                  |        |
|------------------|--------|
| Accel. mode      | GRAPPA |
| Accel. factor PE | 2      |
| Ref. lines PE    | 24     |

# SIEMENS MAGNETOM Aera

## System - Miscellaneous

|                     |                  |
|---------------------|------------------|
| Positioning mode    | REF              |
| Table position      | F                |
| Table position      | 9 mm             |
| MSMA                | S - C - T        |
| Sagittal            | R >> L           |
| Coronal             | A >> P           |
| Transversal         | F >> H           |
| Coil Combine Mode   | Adaptive Combine |
| Matrix Optimization | Off              |
| AutoAlign           | ---              |
| Coil Select Mode    | On - Coil Memory |

## System - Adjustments

|                          |          |
|--------------------------|----------|
| B0 Shim mode             | Standard |
| Adjust with body coil    | Off      |
| Confirm freq. adjustment | On       |
| Only after freq. change  | Off      |
| Assume Dominant Fat      | On       |
| Assume Silicone          | Off      |
| Adjustment Tolerance     | Auto     |

## System - Adjust Volume

|             |             |
|-------------|-------------|
| Position    | Isocenter   |
| Orientation | Transversal |
| Rotation    | 180.00 deg  |
| A >> P      | 204 mm      |
| R >> L      | 340 mm      |
| F >> H      | 149 mm      |
| Reset       | Off         |

## System - Tx/Rx

|                     |               |
|---------------------|---------------|
| Frequency 1H        | 63.639556 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              | 4900 ms |
| Concatenations  | 1       |

## Physio - PACE

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

## Diff - Neuro

|                       |                       |
|-----------------------|-----------------------|
| Diffusion mode        | 3-Scan Trace          |
| Diff. directions      | 3                     |
| Diffusion Scheme      | Monopolar             |
| Diff. weightings      | 3                     |
| b-value 1             | 50 s/mm <sup>2</sup>  |
| b-value 2             | 400 s/mm <sup>2</sup> |
| b-value 3             | 800 s/mm <sup>2</sup> |
| b-value 1             | 2                     |
| b-value 2             | 4                     |
| b-value 3             | 4                     |
| Diff. weighted images | Off                   |
| Trace weighted images | On                    |
| ADC maps              | On                    |
| FA maps               | Off                   |
| Mosaic                | Off                   |
| Tensor                | Off                   |

## Diff - Neuro

|             |   |
|-------------|---|
| Noise level | 0 |
|-------------|---|

## Diff - Body

|                       |                       |
|-----------------------|-----------------------|
| Diffusion mode        | 3-Scan Trace          |
| Diff. directions      | 3                     |
| Diffusion Scheme      | Monopolar             |
| Diff. weightings      | 3                     |
| b-value 1             | 50 s/mm <sup>2</sup>  |
| b-value 2             | 400 s/mm <sup>2</sup> |
| b-value 3             | 800 s/mm <sup>2</sup> |
| b-value 1             | 2                     |
| b-value 2             | 4                     |
| b-value 3             | 4                     |
| Diff. weighted images | Off                   |
| Trace weighted images | On                    |
| ADC maps              | On                    |
| Exponential ADC Maps  | Off                   |
| FA maps               | Off                   |
| Invert Gray Scale     | Off                   |
| Calculated Image      | Off                   |
| b-Value >=            | 0 s/mm <sup>2</sup>   |
| Noise level           | 0                     |

## Diff - Composing

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | On  |
| Mode             | 2D  |

## Sequence - Part 1

|                   |             |
|-------------------|-------------|
| Introduction      | Off         |
| Optimization      | Min. TE     |
| Multi-slice mode  | Interleaved |
| Free echo spacing | Off         |
| Echo spacing      | 0.77 ms     |
| Bandwidth         | 1544 Hz/Px  |

## Sequence - Part 2

|               |         |
|---------------|---------|
| EPI factor    | 108     |
| RF pulse type | Low SAR |
| Gradient mode | Fast    |

\USER\SMS\_DWI\Regions\Breast\ep2d\_diff\_tra\_spair\_s2

TA: 1:40 PM: REF Voxel size: 1.9x1.9x4.0 mmPAT: 4 Rel. SNR: 1.00 : epse

**Properties**

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

**Routine**

|                    |  |
|--------------------|--|
| Slice group        | 1  |
| Slices             | 30   |
| Dist. factor       | 25 %   |
| Position           | L20.6 P6.1 H29.1 mm  |
| Orientation        | Transversal  |
| Phase enc. dir.    | P >> A   |
| AutoAlign          | ---  |
| Phase oversampling | 0 %  |
| FoV read           | 340 mm   |
| FoV phase          | 60.0 %   |
| Slice thickness    | 4.0 mm   |
| TR                 | 2700 ms  |
| TE                 | 76.0 ms  |
| Concatenations     | 1  |
| Filter             | Dynamic Field Corr., Distortion Corr.(2D), Elliptical filter |
| Coil elements      | BAL;BAR;BCL;BCR  |

**Contrast - Common**

|                   |         |
|-------------------|---------|
| TR                | 2700 ms |
| TE                | 76.0 ms |
| MTC               | Off     |
| Magn. preparation | None    |
| Fat suppr.        | SPAIR   |
| Fat sat. mode     | Strong  |

**Contrast - Dynamic**

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

**Resolution - Common**

|                       |        |
|-----------------------|--------|
| FoV read              | 340 mm |
| FoV phase             | 60.0 % |
| Slice thickness       | 4.0 mm |
| Base resolution       | 180    |
| Phase resolution      | 100 %  |
| Phase partial Fourier | Off    |
| Interpolation         | Off    |

**Resolution - iPAT**

|                  |              |
|------------------|--------------|
| Accel. mode      | Slice accel. |
| Accel. factor PE | 2            |
| Ref. lines PE    | 24           |

**Resolution - iPAT**

|                     |              |
|---------------------|--------------|
| Accel. factor slice | 2            |
| Reference scan mode | EPI/separate |

**Resolution - Filter Image**

|                     |     |
|---------------------|-----|
| Distortion Corr.    | On  |
| Mode                | 2D  |
| Prescan Normalize   | Off |
| Dynamic Field Corr. | On  |
| Unfiltered images   | Off |

**Resolution - Filter Rawdata**

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

**Geometry - Common**

|                 |                     |
|-----------------|---------------------|
| Slice group     | 1                   |
| Slices          | 30                  |
| Dist. factor    | 25 %                |
| Position        | L20.6 P6.1 H29.1 mm |
| Orientation     | Transversal         |
| Phase enc. dir. | P >> A              |
| FoV read        | 340 mm              |
| FoV phase       | 60.0 %              |
| Slice thickness | 4.0 mm              |
| TR              | 2700 ms             |
| TE              | 76.0 ms             |
| Concatenations  | Interleaved         |
| Series          | Interleaved         |
| Filter          | 1                   |

**Geometry - AutoAlign**

|                     |                     |
|---------------------|---------------------|
| Slice group         | 1                   |
| Position            | L20.6 P6.1 H29.1 mm |
| Orientation         | Transversal         |
| Phase enc. dir.     | P >> A              |
| AutoAlign           | ---                 |
| Initial Position    | L20.6 P6.1 H29.1    |
| L                   | 20.6 mm             |
| P                   | 6.1 mm              |
| H                   | 29.1 mm             |
| Initial Rotation    | -180.00 deg         |
| Initial Orientation | Transversal         |

**Geometry - Saturation**

|               |                       |
|---------------|-----------------------|
| Sat. region   | 1                     |
| Thickness     | 150 mm                |
| Position      | R9.8 P135.7 H9.0 mm   |
| Orientation   | Coronal               |
| Sat. region   | 2                     |
| Thickness     | 150 mm                |
| Position      | R14.1 P285.9 H12.5 mm |
| Orientation   | Coronal               |
| Fat sat. mode | Strong                |
| Special sat.  | None                  |

**Geometry - Navigator**

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

**Geometry - Tim Planning Suite**

|                  |     |
|------------------|-----|
| 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   | Adaptive Combine |
| Matrix Optimization | Off              |
| AutoAlign           | ---              |
| Coil Select Mode    | On - Coil Memory |

**System - Adjustments**

|                          |          |
|--------------------------|----------|
| B0 Shim mode             | Standard |
| Adjust with body coil    | Off      |
| Confirm freq. adjustment | On       |
| Only after freq. change  | Off      |
| Assume Dominant Fat      | On       |
| Assume Silicone          | Off      |
| Adjustment Tolerance     | Auto     |

**System - Adjust Volume**

|             |                     |
|-------------|---------------------|
| Position    | L20.6 P6.1 H29.1 mm |
| Orientation | Transversal         |
| Rotation    | 180.00 deg          |
| A >> P      | 204 mm              |
| R >> L      | 340 mm              |
| F >> H      | 149 mm              |
| Reset       | Off                 |

**System - Tx/Rx**

|                     |               |
|---------------------|---------------|
| Frequency 1H        | 63.639556 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              | 2700 ms |
| Concatenations  | 1       |

**Physio - PACE**

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

**Diff - Neuro**

|                       |                       |
|-----------------------|-----------------------|
| Diffusion mode        | 3-Scan Trace          |
| Diff. directions      | 3                     |
| Diffusion Scheme      | Monopolar             |
| Diff. weightings      | 3                     |
| b-value 1             | 50 s/mm <sup>2</sup>  |
| b-value 2             | 400 s/mm <sup>2</sup> |
| b-value 3             | 800 s/mm <sup>2</sup> |
| b-value 1             | 2                     |
| b-value 2             | 4                     |
| b-value 3             | 4                     |
| Diff. weighted images | Off                   |
| Trace weighted images | On                    |

**Diff - Neuro**

|             |     |
|-------------|-----|
| ADC maps    | On  |
| FA maps     | Off |
| Mosaic      | Off |
| Tensor      | Off |
| Noise level | 0   |

**Diff - Body**

|                       |                       |
|-----------------------|-----------------------|
| Diffusion mode        | 3-Scan Trace          |
| Diff. directions      | 3                     |
| Diffusion Scheme      | Monopolar             |
| Diff. weightings      | 3                     |
| b-value 1             | 50 s/mm <sup>2</sup>  |
| b-value 2             | 400 s/mm <sup>2</sup> |
| b-value 3             | 800 s/mm <sup>2</sup> |
| b-value 1             | 2                     |
| b-value 2             | 4                     |
| b-value 3             | 4                     |
| Diff. weighted images | Off                   |
| Trace weighted images | On                    |
| ADC maps              | On                    |
| Exponential ADC Maps  | Off                   |
| FA maps               | Off                   |
| Invert Gray Scale     | Off                   |
| Calculated Image      | Off                   |
| b-Value >=            | 0 s/mm <sup>2</sup>   |
| Noise level           | 0                     |

**Diff - Composing**

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | On  |
| Mode             | 2D  |

**Sequence - Part 1**

|                   |             |
|-------------------|-------------|
| Introduction      | Off         |
| Optimization      | None        |
| Multi-slice mode  | Interleaved |
| Free echo spacing | Off         |
| Echo spacing      | 0.77 ms     |
| Bandwidth         | 1462 Hz/Px  |

**Sequence - Part 2**

|               |         |
|---------------|---------|
| EPI factor    | 108     |
| RF pulse type | Low SAR |
| Gradient mode | Fast    |