

# QA protocol: P2A\_B6\_M2

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<sup>#</sup>these authors share last-authorship

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## 1 CBCT image data

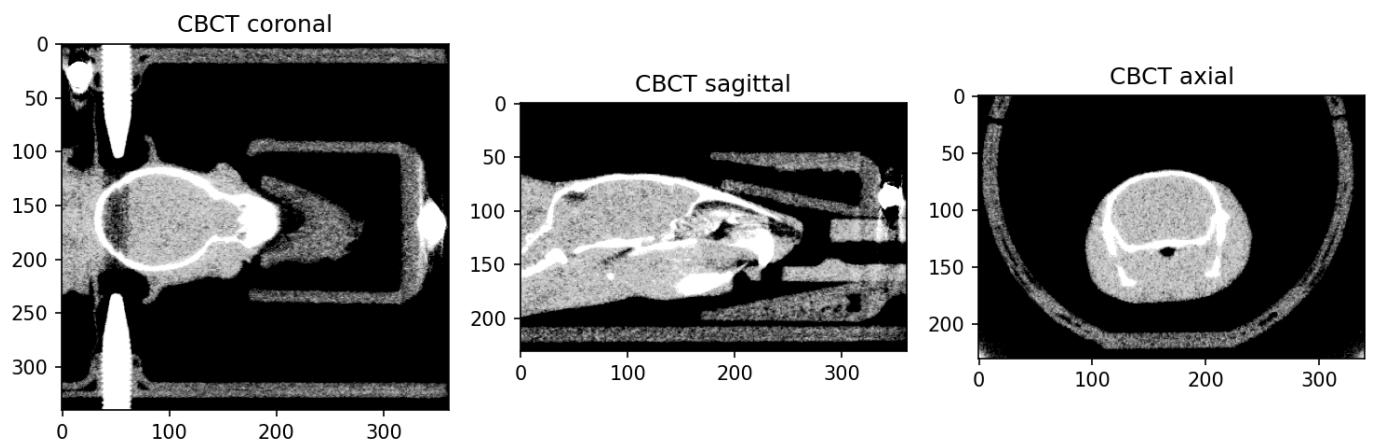


Figure 1.1: Multi-view cutplanes of CBCT serving as anatomical reference

## 2 Simulation image data

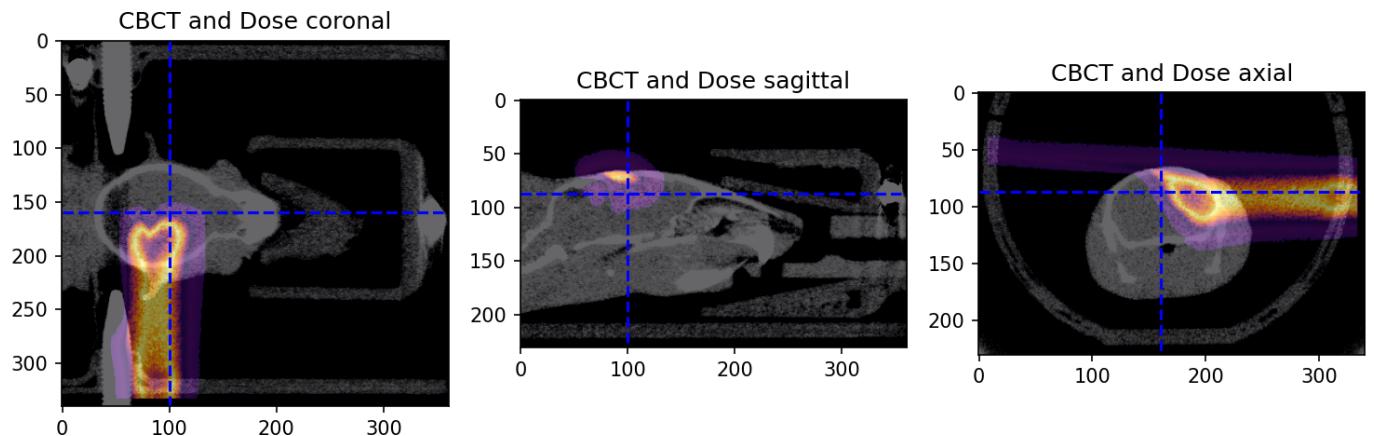


Figure 2.1: Overlay of CBCT and simulated dose distribution

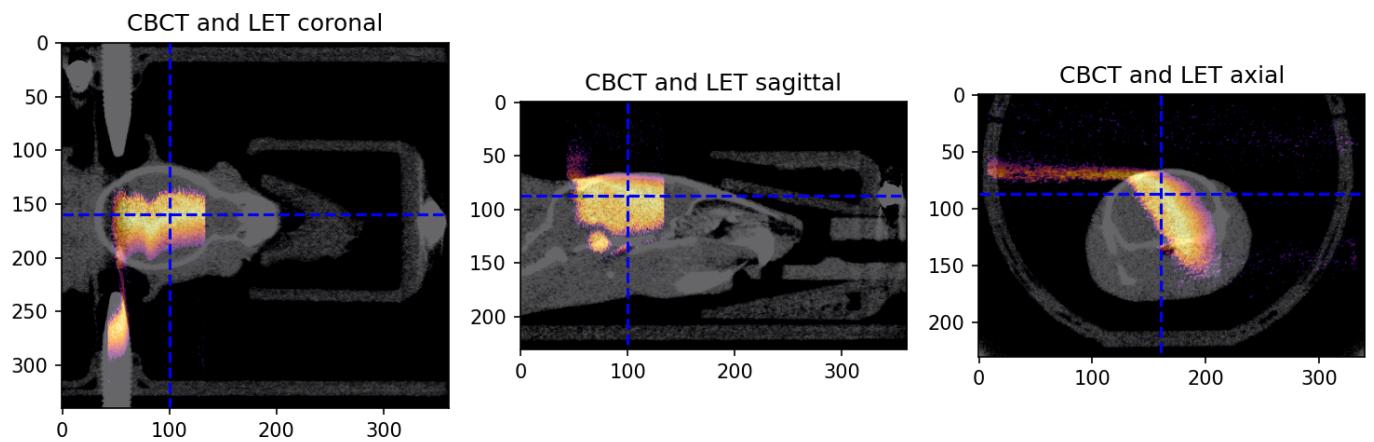


Figure 2.2: Overlay of CBCT and simulated LET distribution

### 3 Atlas image data

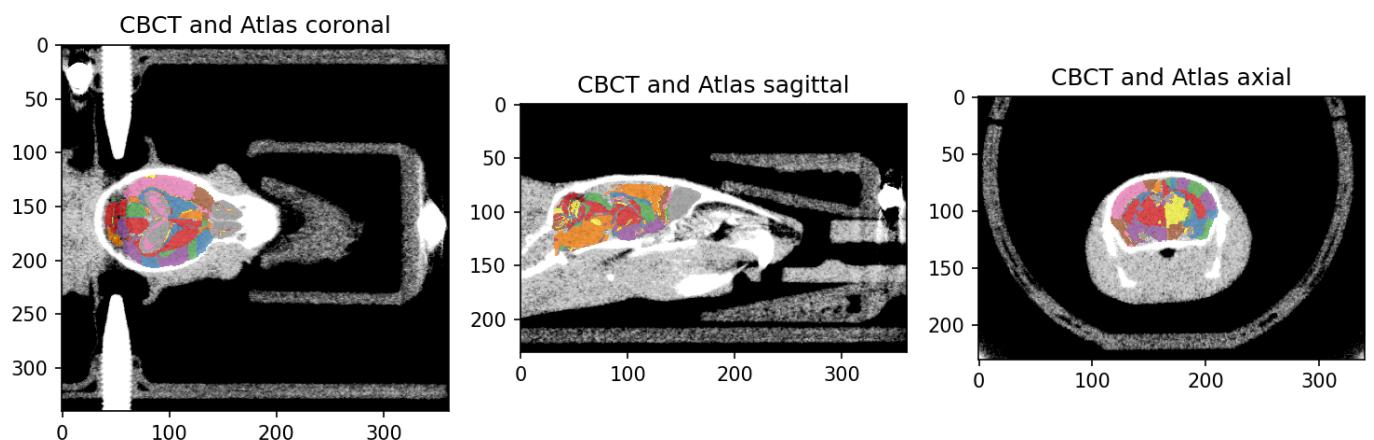


Figure 3.1: Overlay of CBCT and registered DSURQE brain atlas

## 4 MRI image data

### 4.1 Denoising

#### 4.1.1 Sequence type: T1

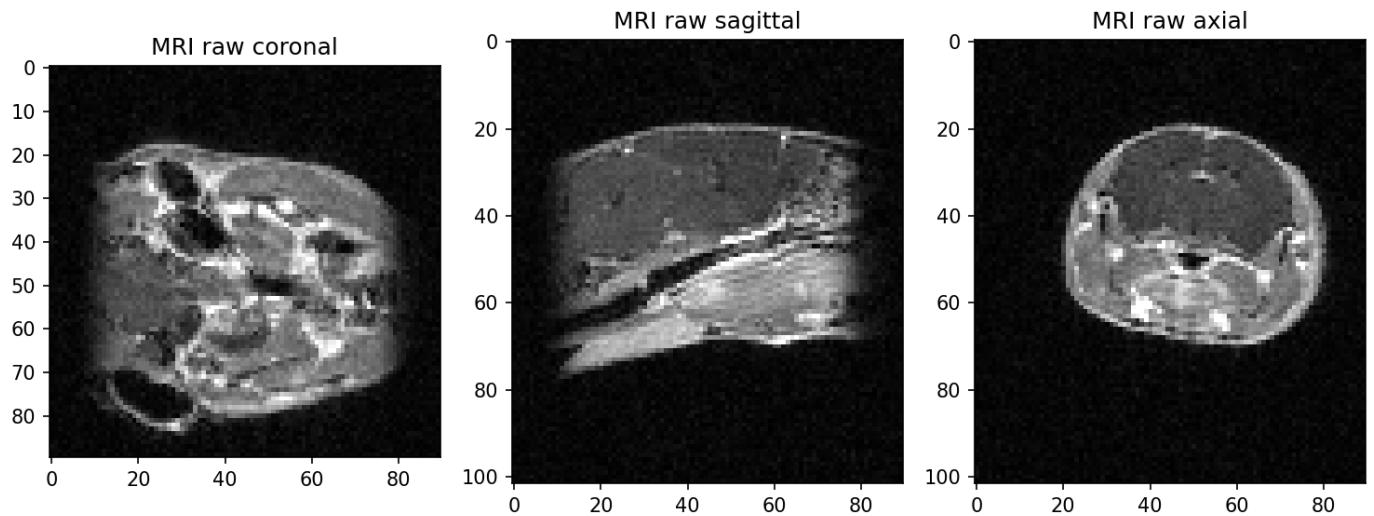


Figure 4.1: Raw MRI image, Timepoint:Week\_00, Sequence type: T1

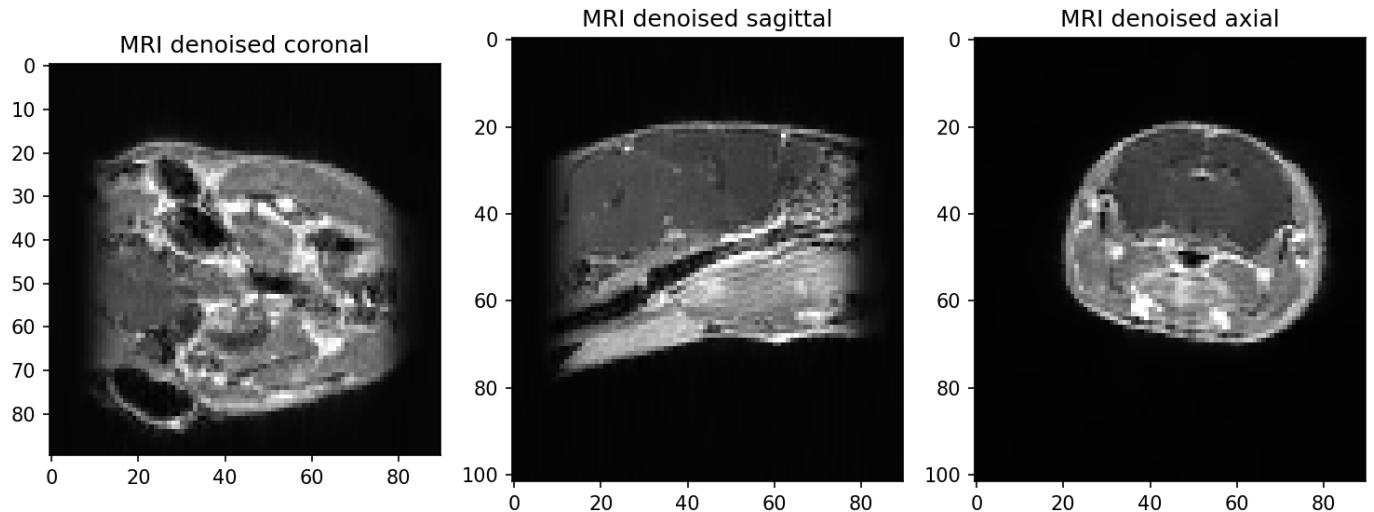


Figure 4.2: Denoised MRI image, Timepoint:Week\_00, Sequence type: T1

#### 4 MRI image data

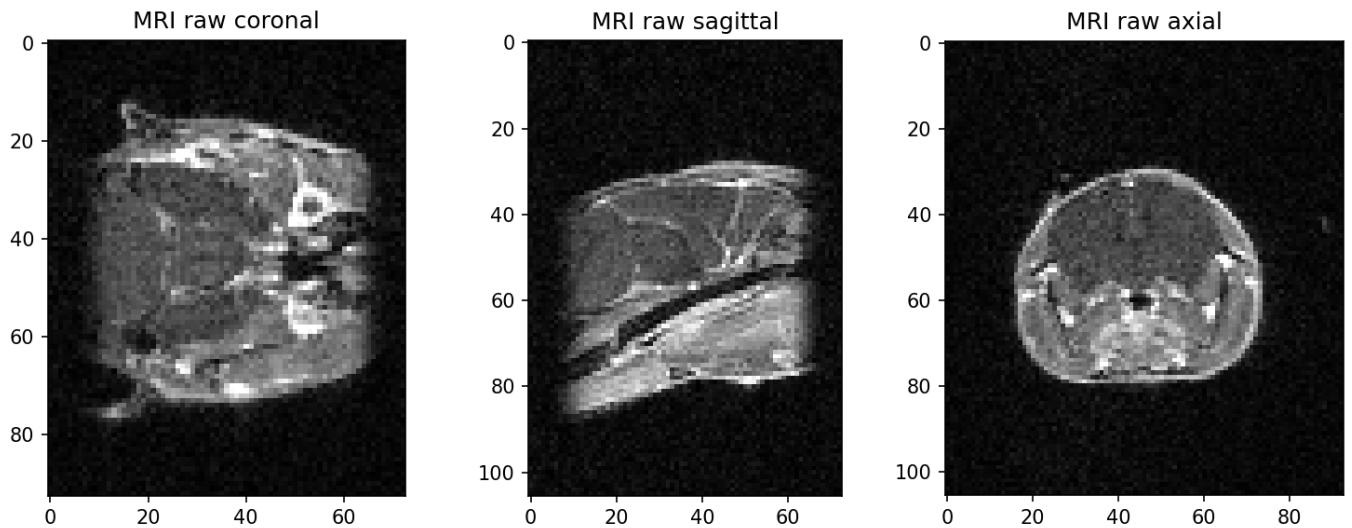


Figure 4.3: Raw MRI image, Timepoint:Week\_01, Sequence type: T1

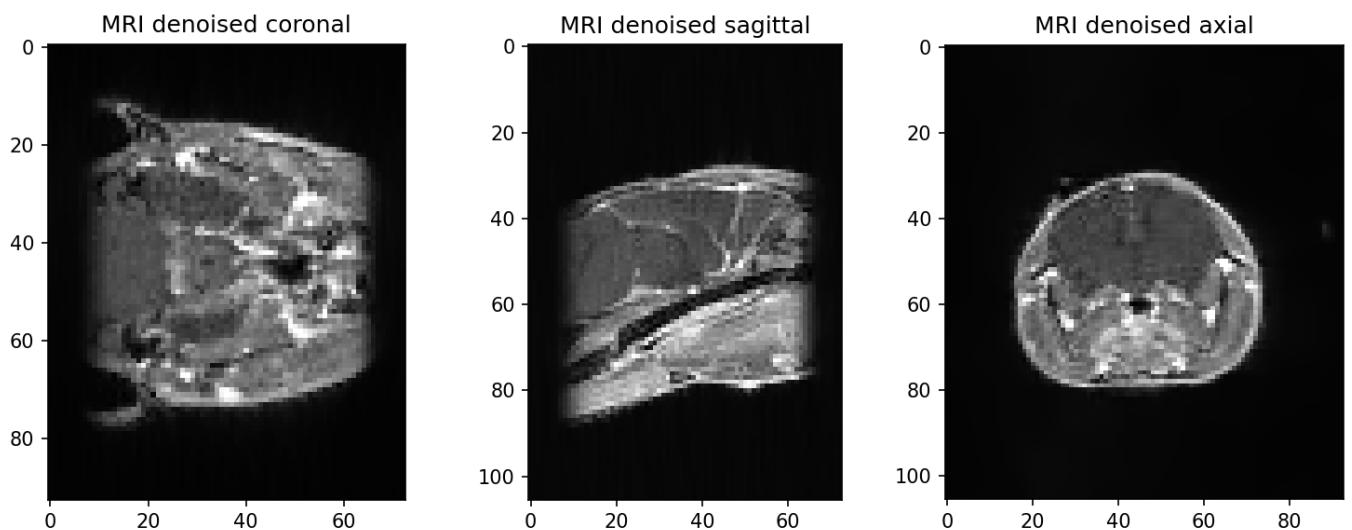


Figure 4.4: Denoised MRI image, Timepoint:Week\_01, Sequence type: T1

#### 4 MRI image data

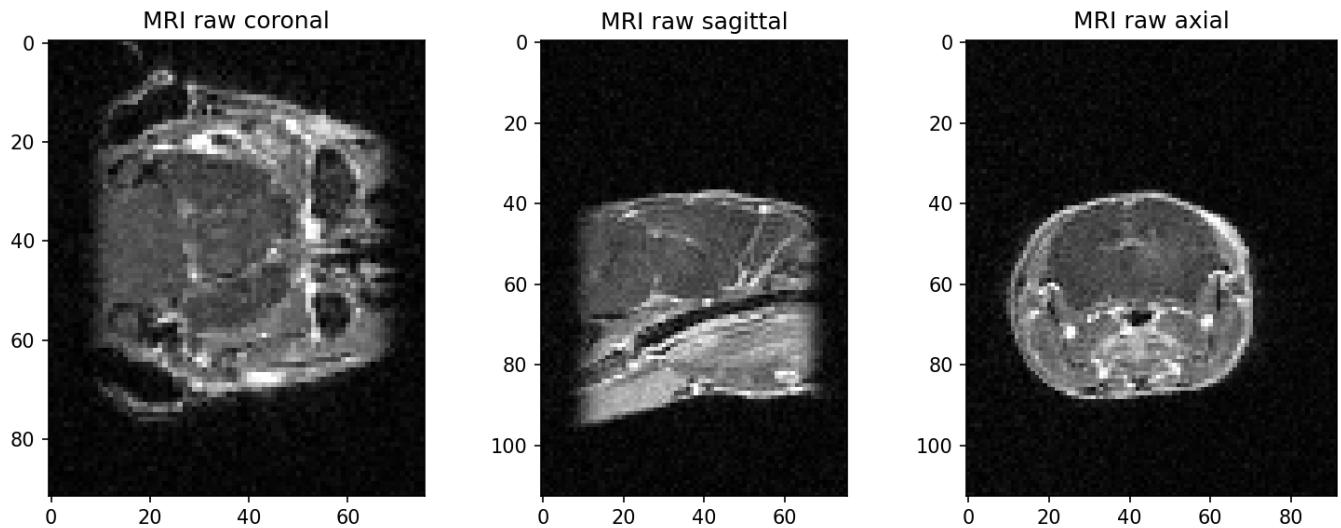


Figure 4.5: Raw MRI image, Timepoint:Week\_03, Sequence type: T1

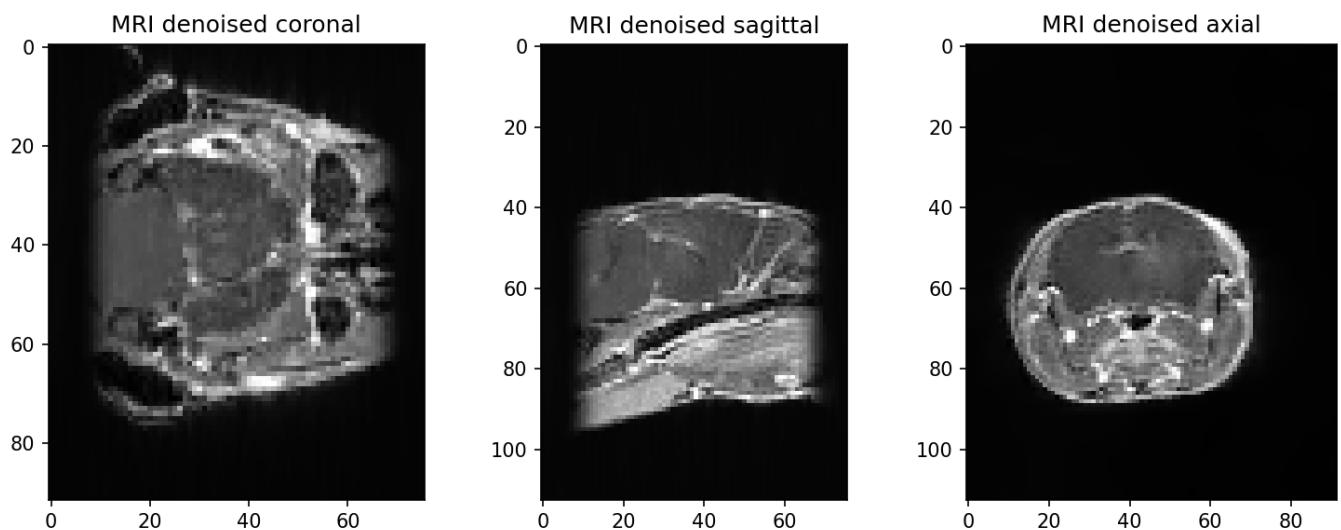


Figure 4.6: Denoised MRI image, Timepoint:Week\_03, Sequence type: T1

#### 4 MRI image data

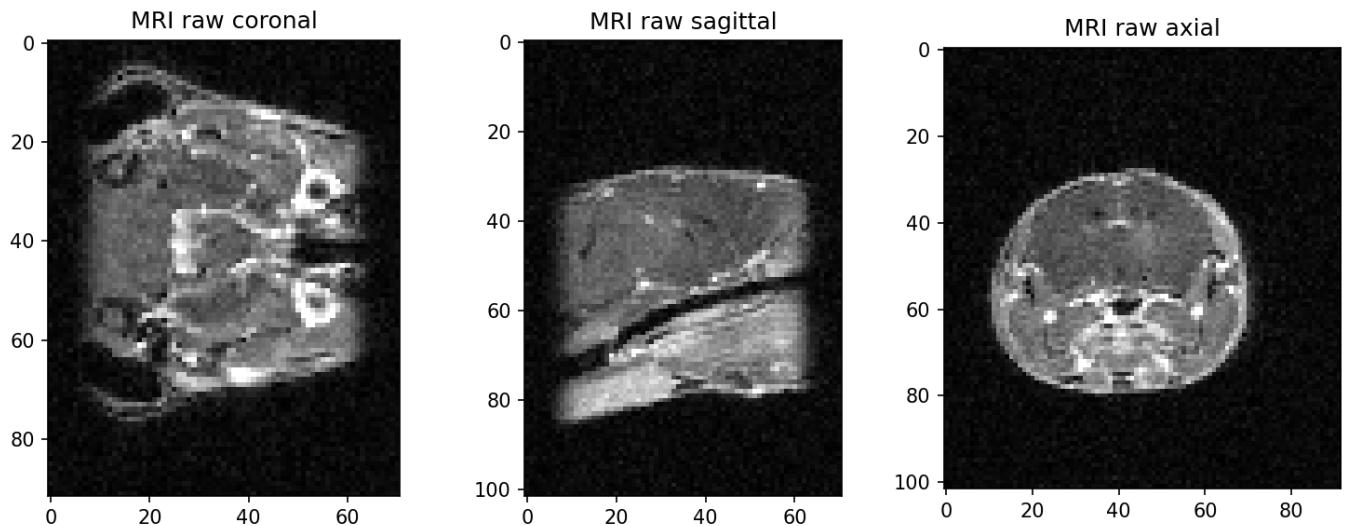


Figure 4.7: Raw MRI image, Timepoint:Week\_05, Sequence type: T1

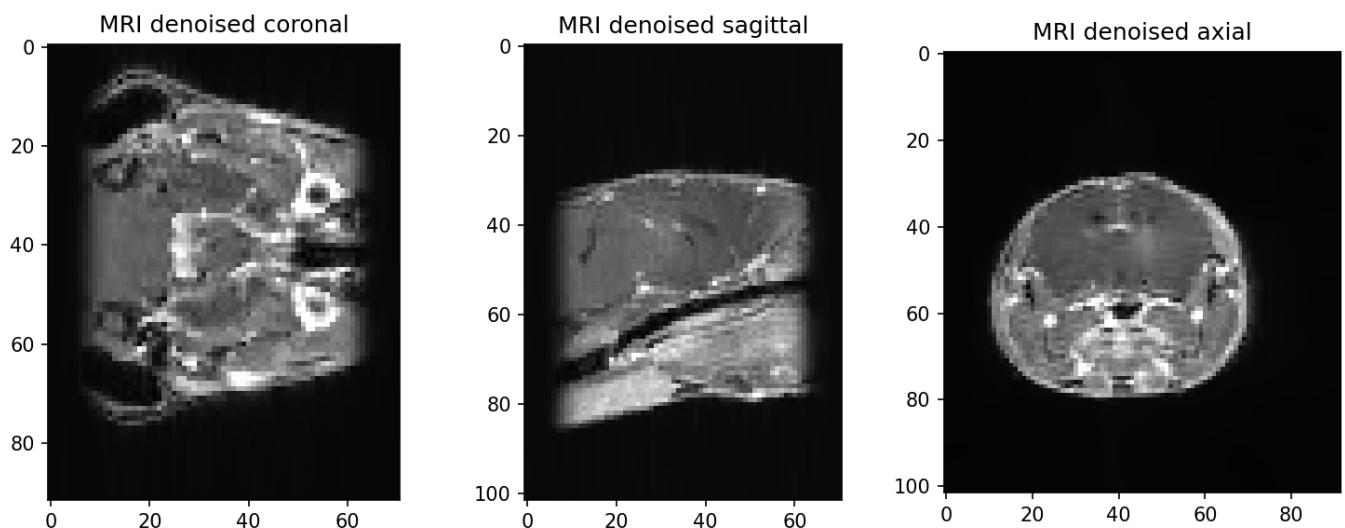


Figure 4.8: Denoised MRI image, Timepoint:Week\_05, Sequence type: T1

#### 4 MRI image data

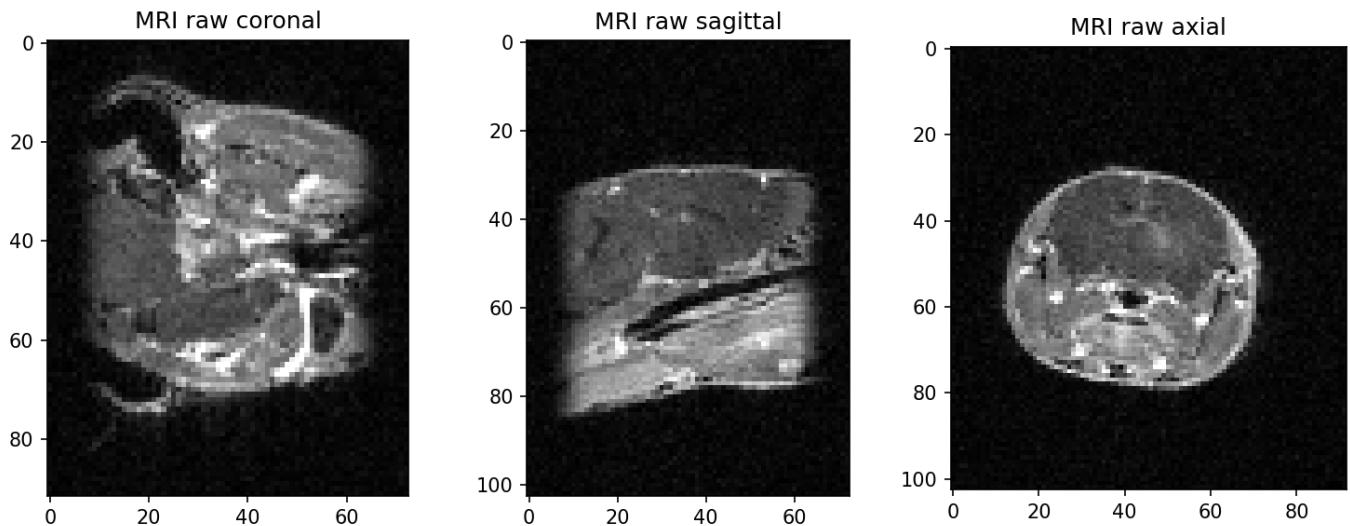


Figure 4.9: Raw MRI image, Timepoint:Week\_07, Sequence type: T1

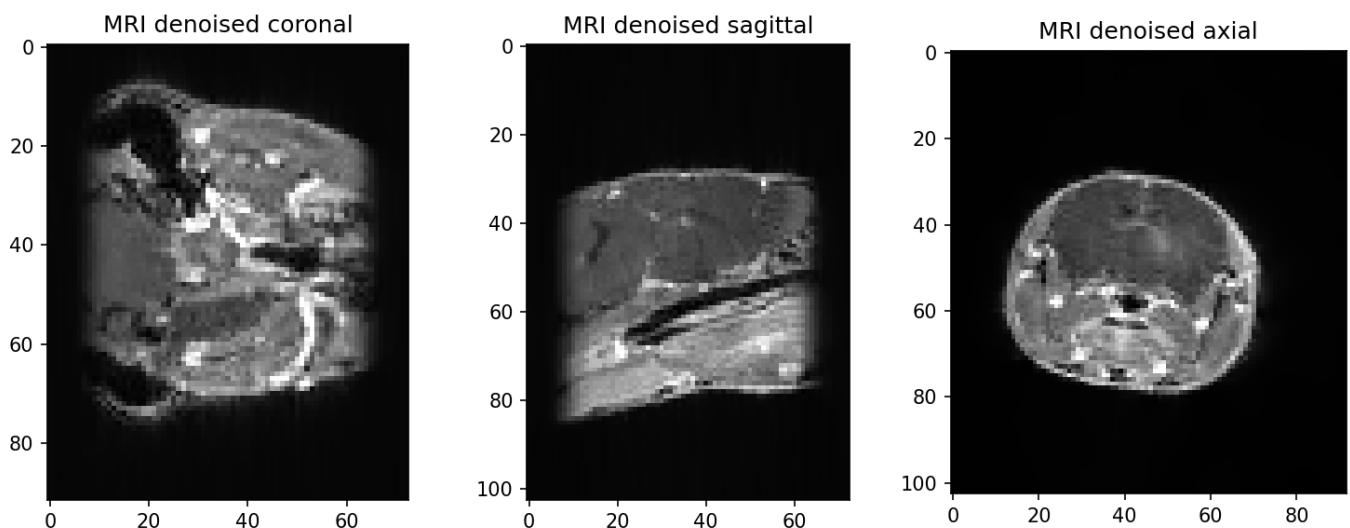


Figure 4.10: Denoised MRI image, Timepoint:Week\_07, Sequence type: T1

#### 4 MRI image data

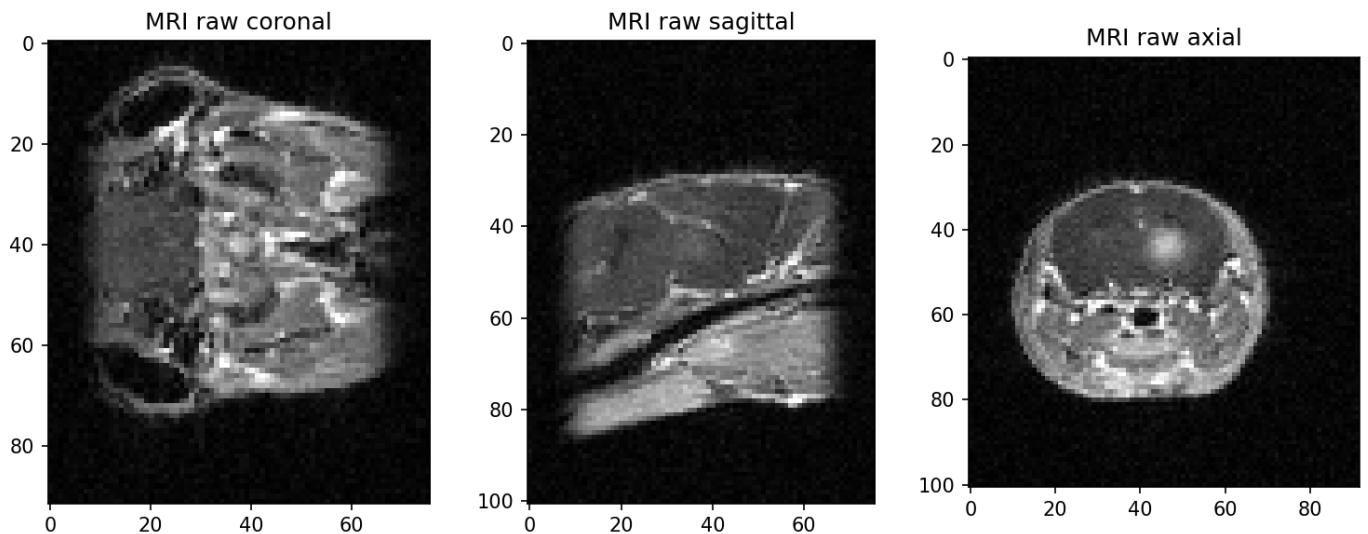


Figure 4.11: Raw MRI image, Timepoint:Week\_09, Sequence type: T1

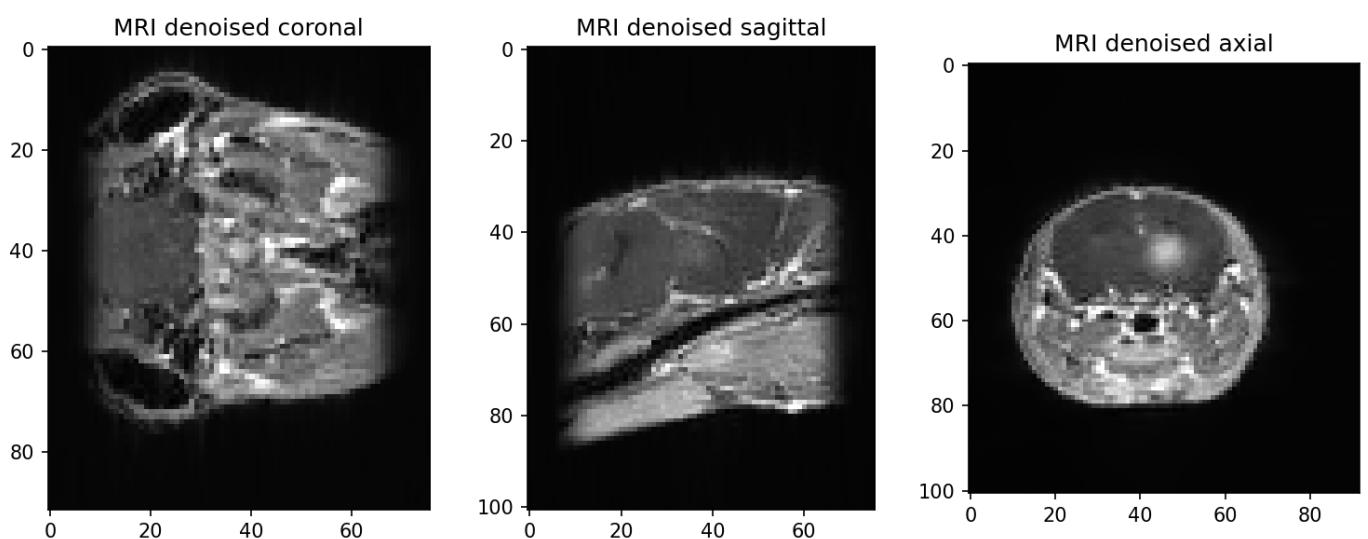


Figure 4.12: Denoised MRI image, Timepoint:Week\_09, Sequence type: T1

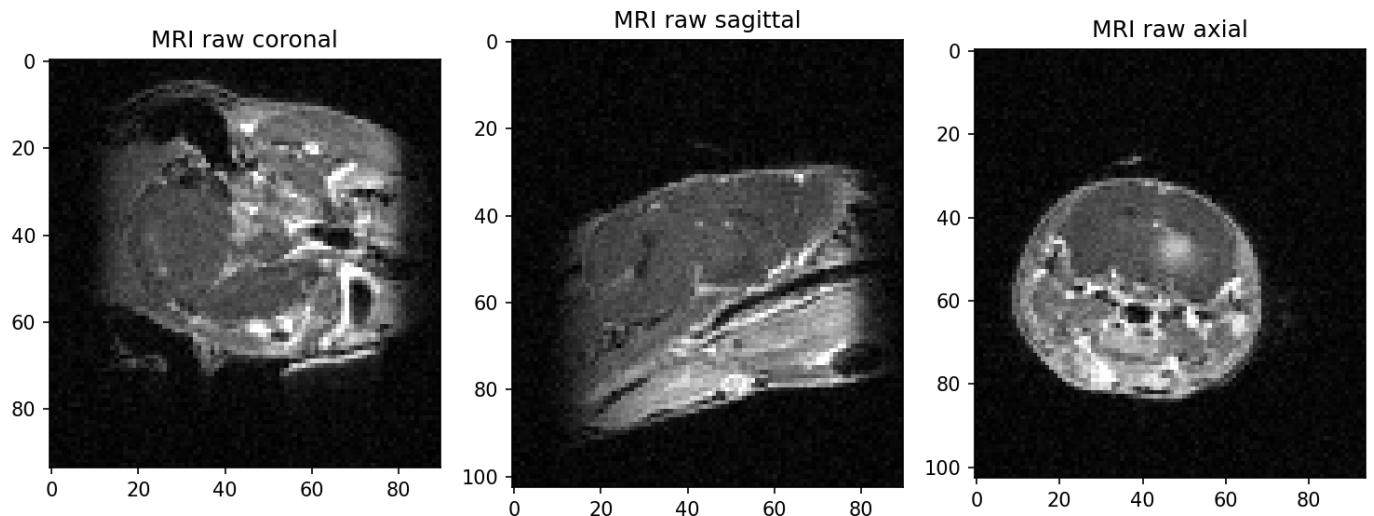


Figure 4.13: Raw MRI image, Timepoint:Week\_11, Sequence type: T1

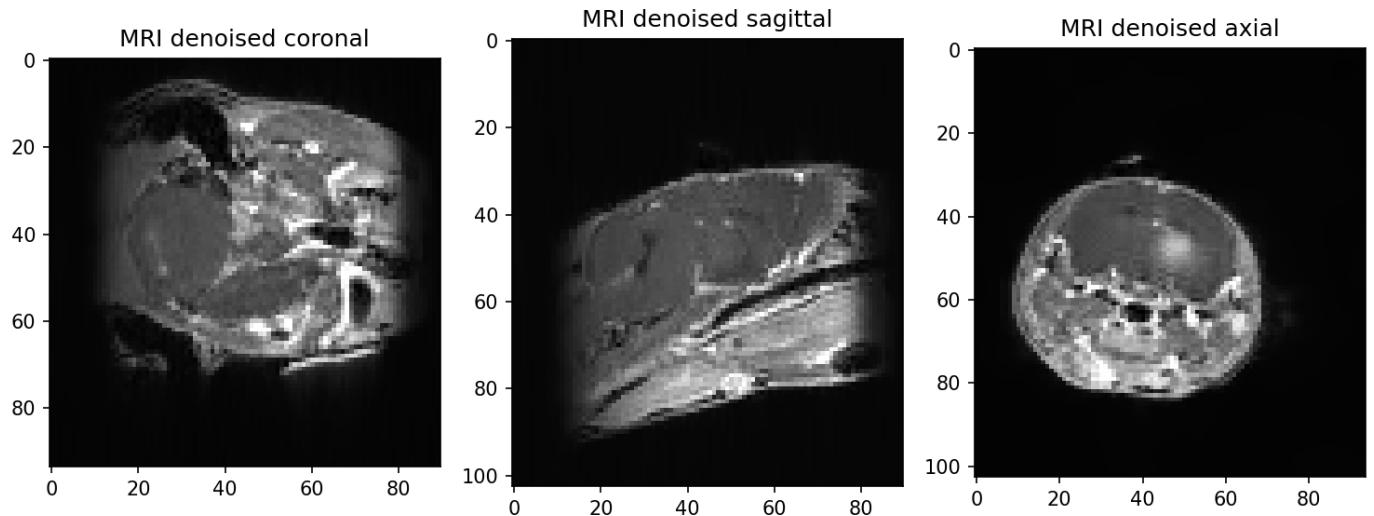


Figure 4.14: Denoised MRI image, Timepoint:Week\_11, Sequence type: T1

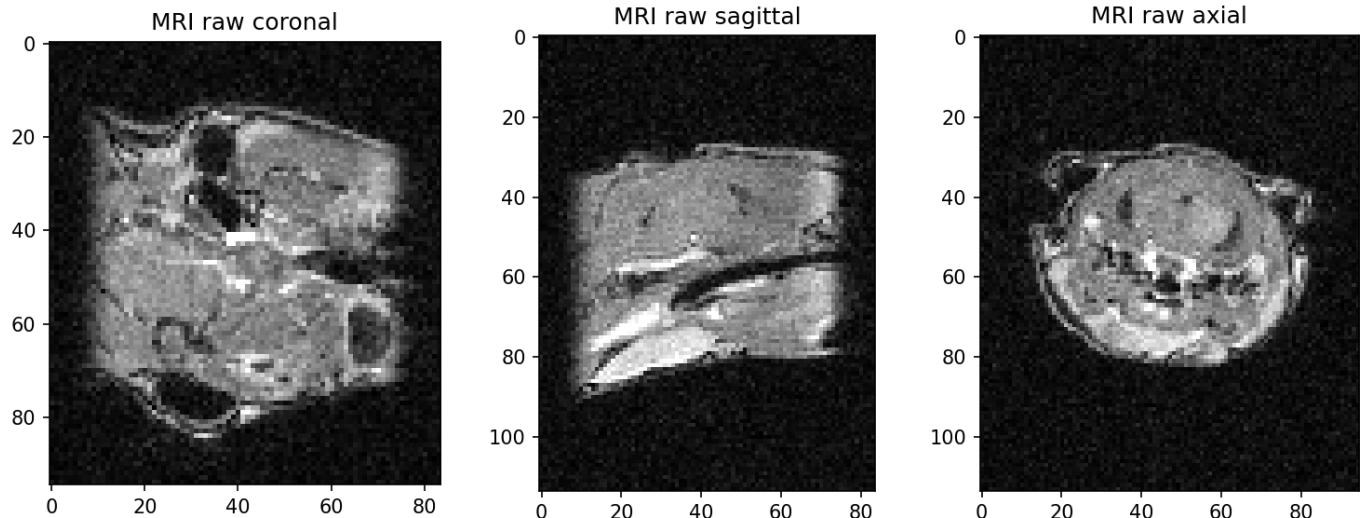


Figure 4.15: Raw MRI image, Timepoint:Week\_13, Sequence type: T1

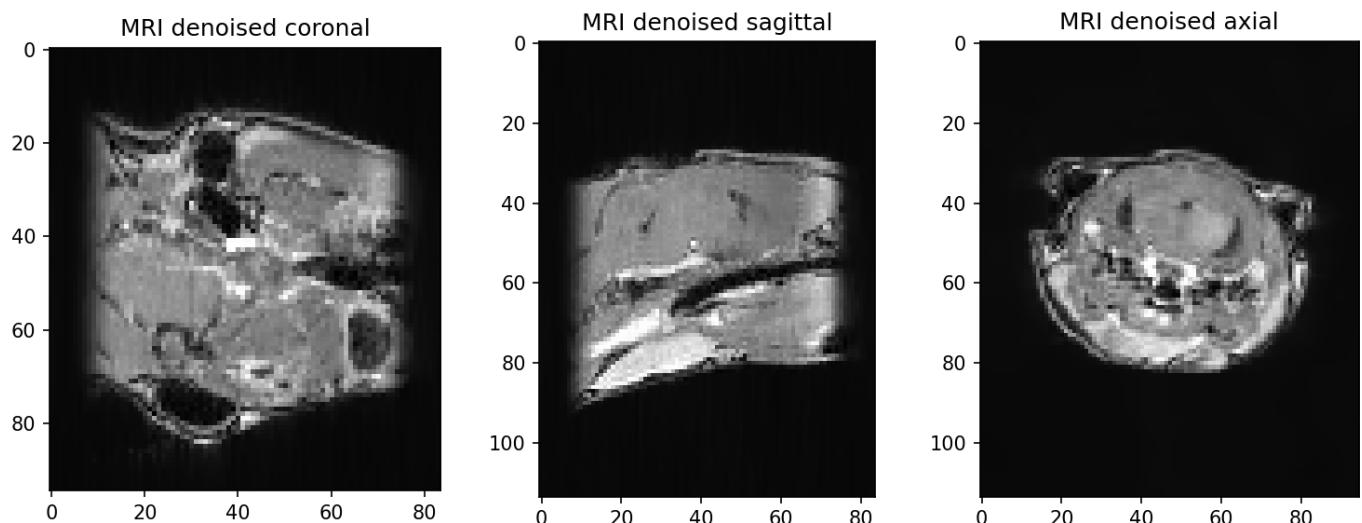


Figure 4.16: Denoised MRI image, Timepoint:Week\_13, Sequence type: T1

#### 4 MRI image data

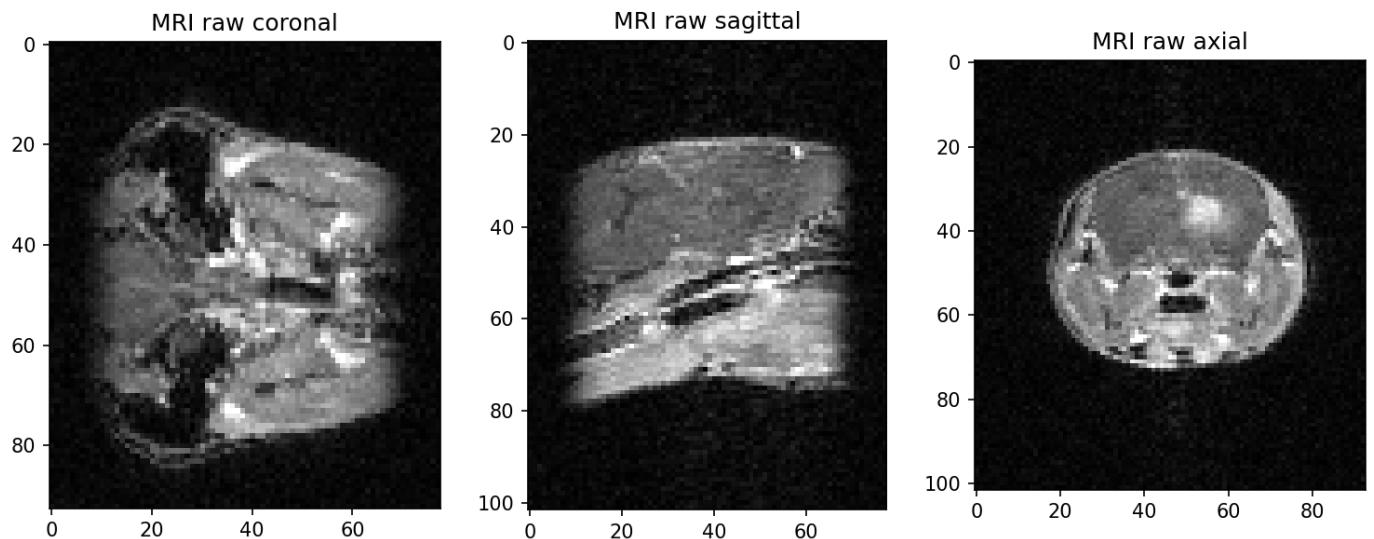


Figure 4.17: Raw MRI image, Timepoint:Week\_15, Sequence type: T1

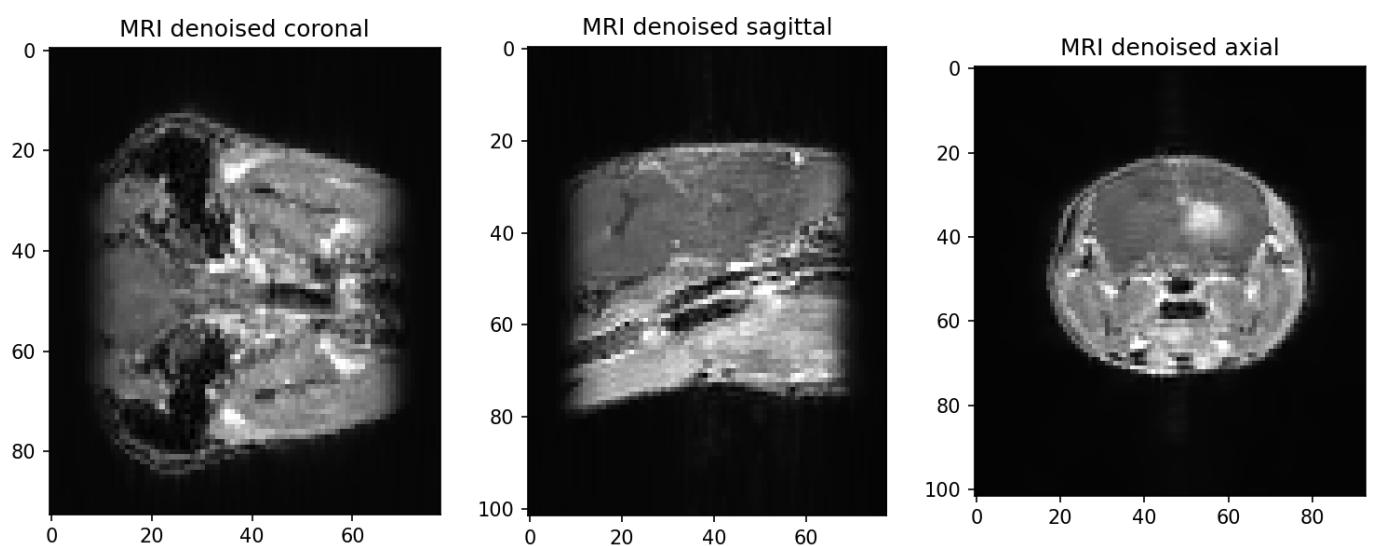


Figure 4.18: Denoised MRI image, Timepoint:Week\_15, Sequence type: T1

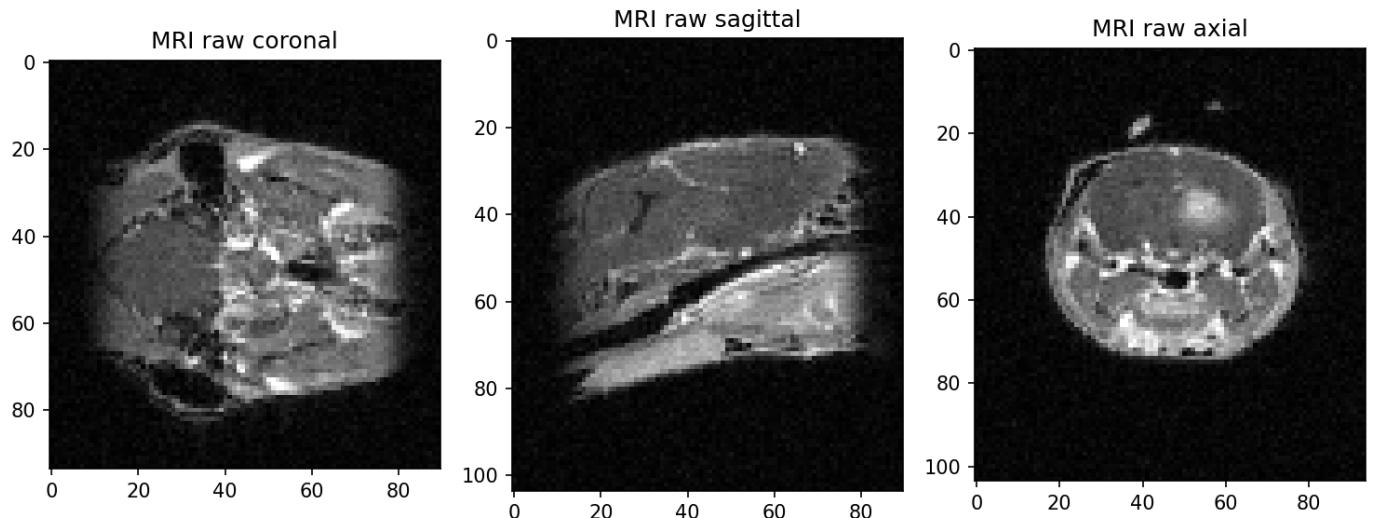


Figure 4.19: Raw MRI image, Timepoint:Week\_16, Sequence type: T1

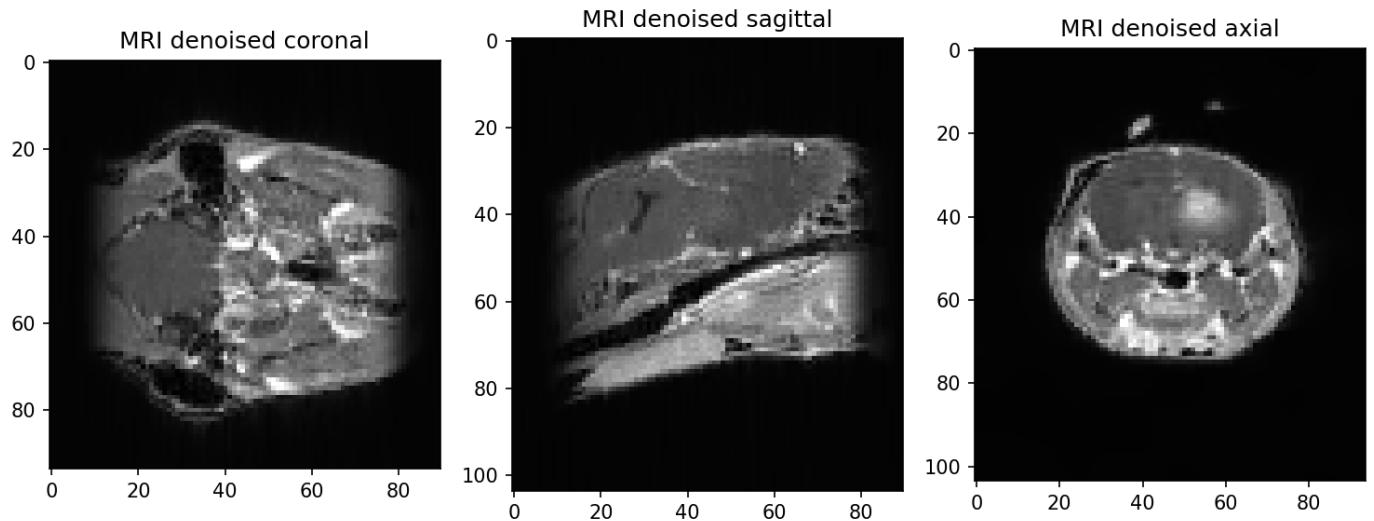


Figure 4.20: Denoised MRI image, Timepoint:Week\_16, Sequence type: T1

#### 4 MRI image data

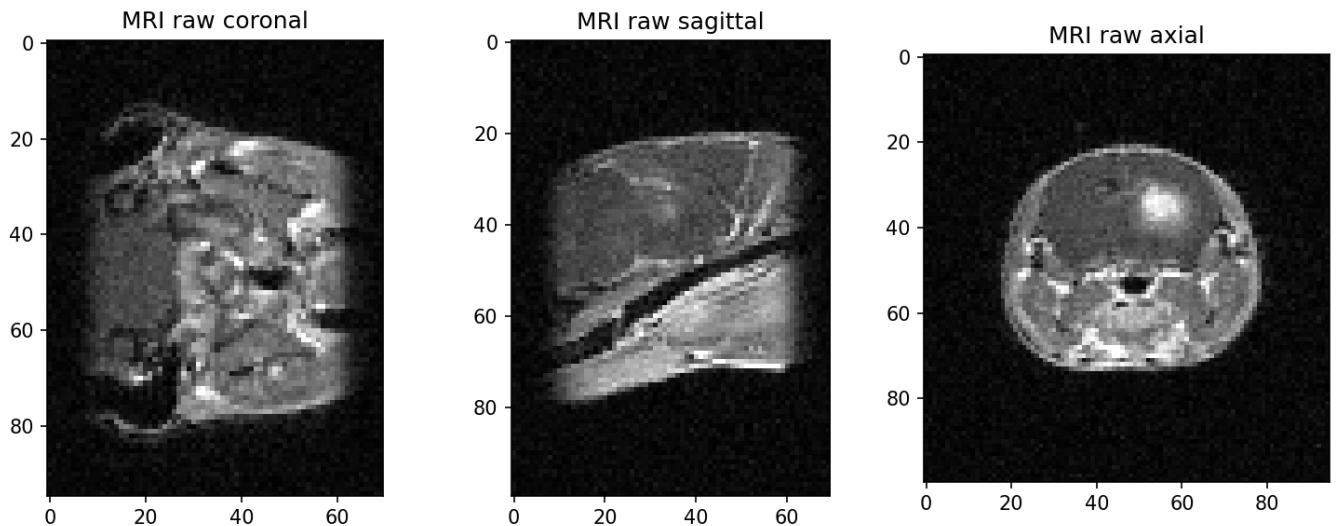


Figure 4.21: Raw MRI image, Timepoint:Week\_25, Sequence type: T1

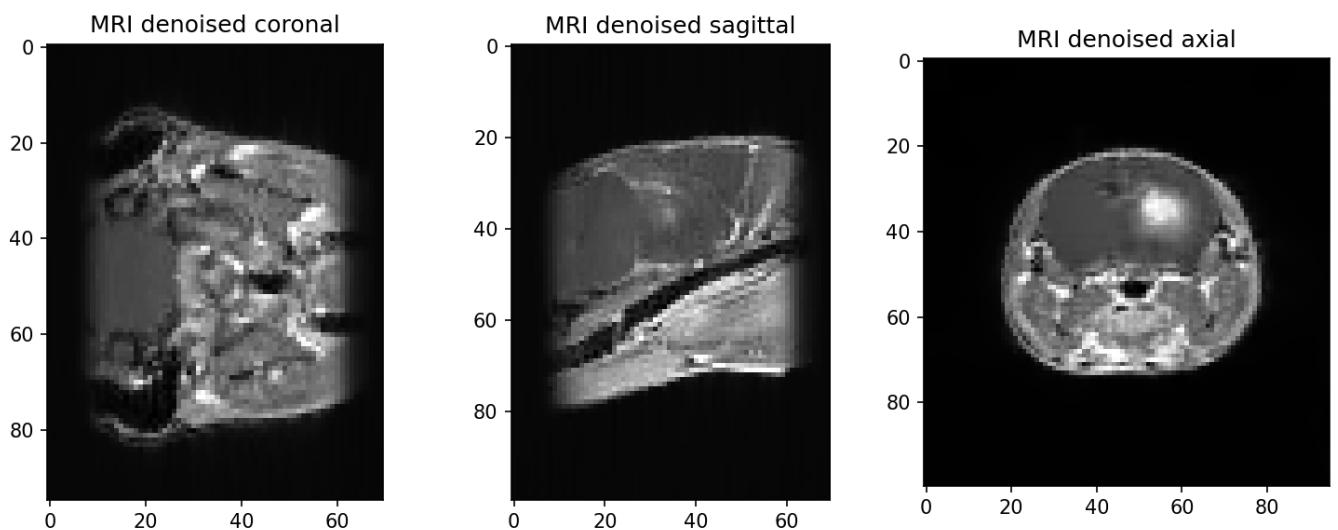


Figure 4.22: Denoised MRI image, Timepoint:Week\_25, Sequence type: T1

#### 4.1.2 Sequence type: T2

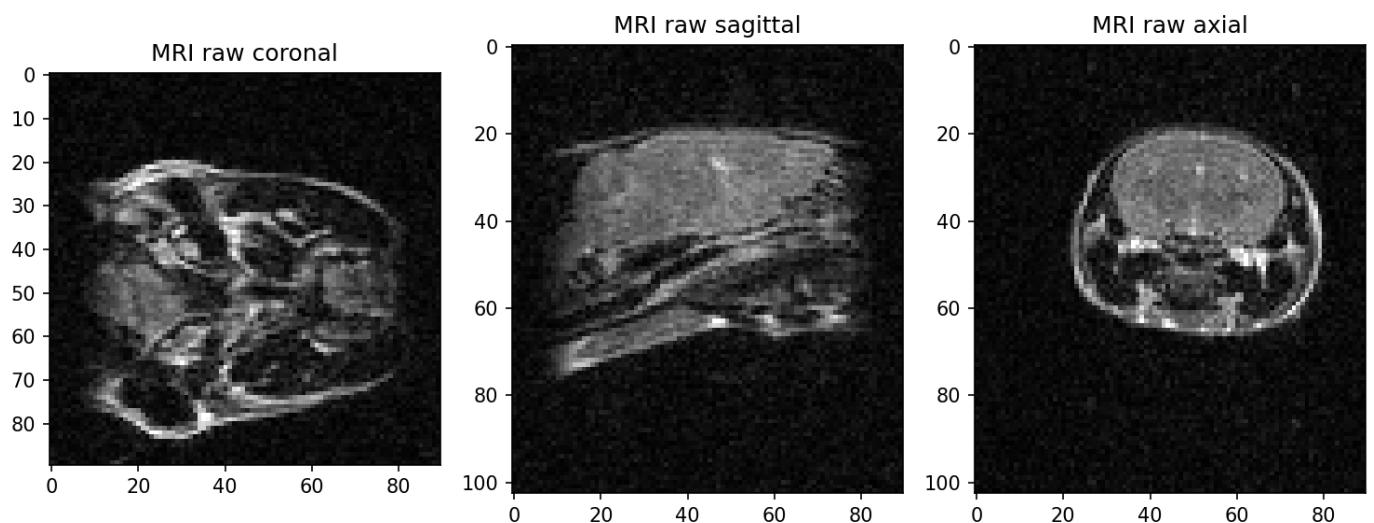


Figure 4.23: Raw MRI image, Timepoint:Week\_00, Sequence type: T2

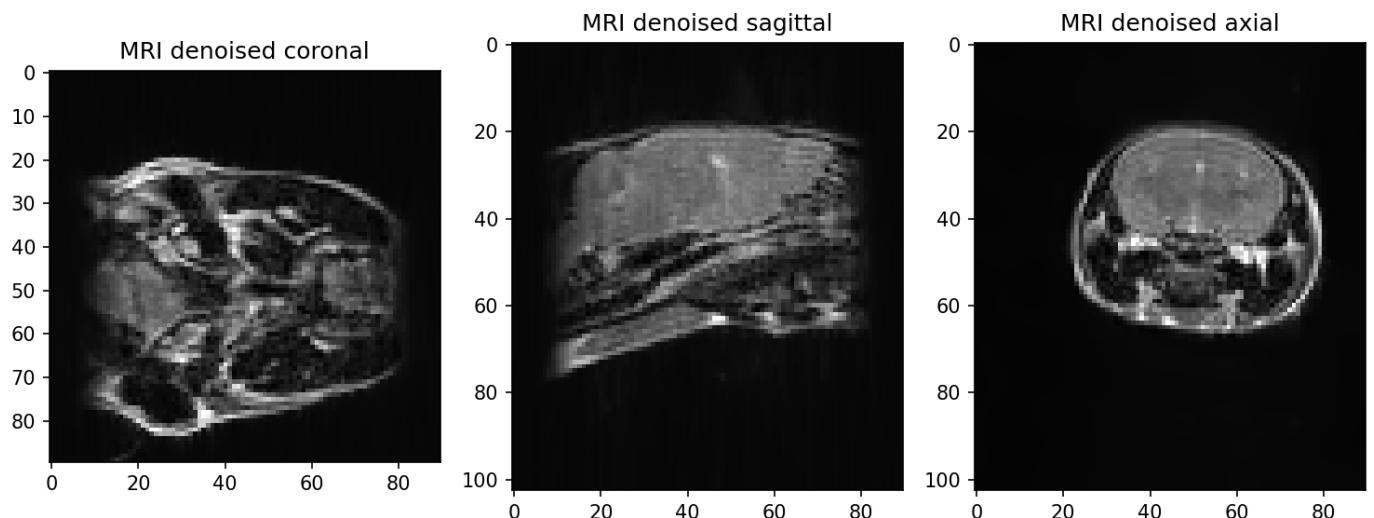


Figure 4.24: Denoised MRI image, Timepoint:Week\_00, Sequence type: T2

#### 4 MRI image data

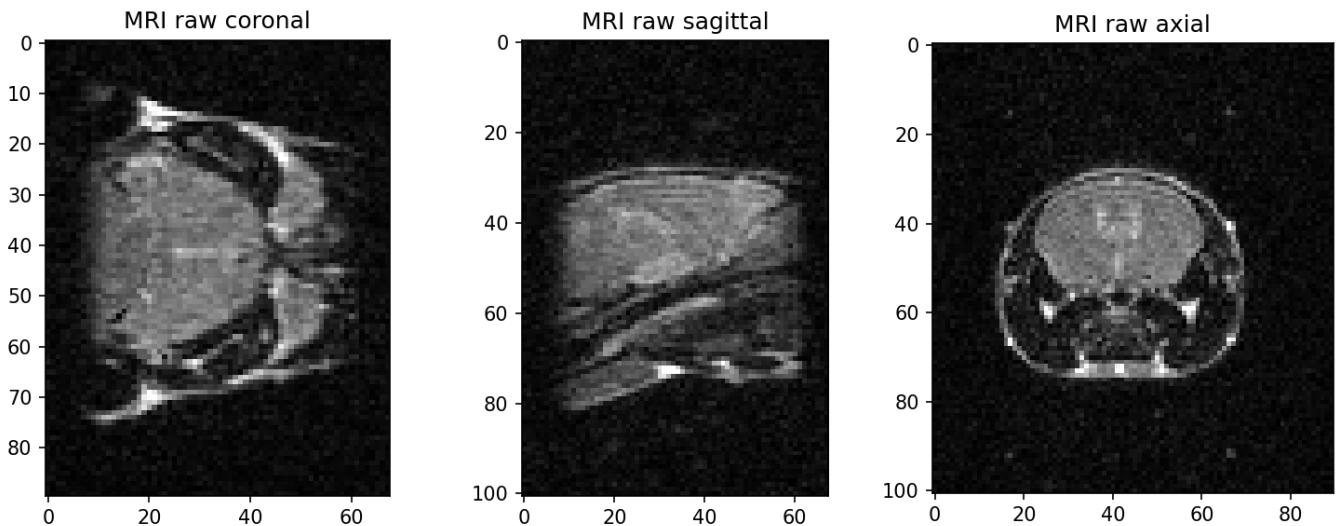


Figure 4.25: Raw MRI image, Timepoint:Week\_05, Sequence type: T2

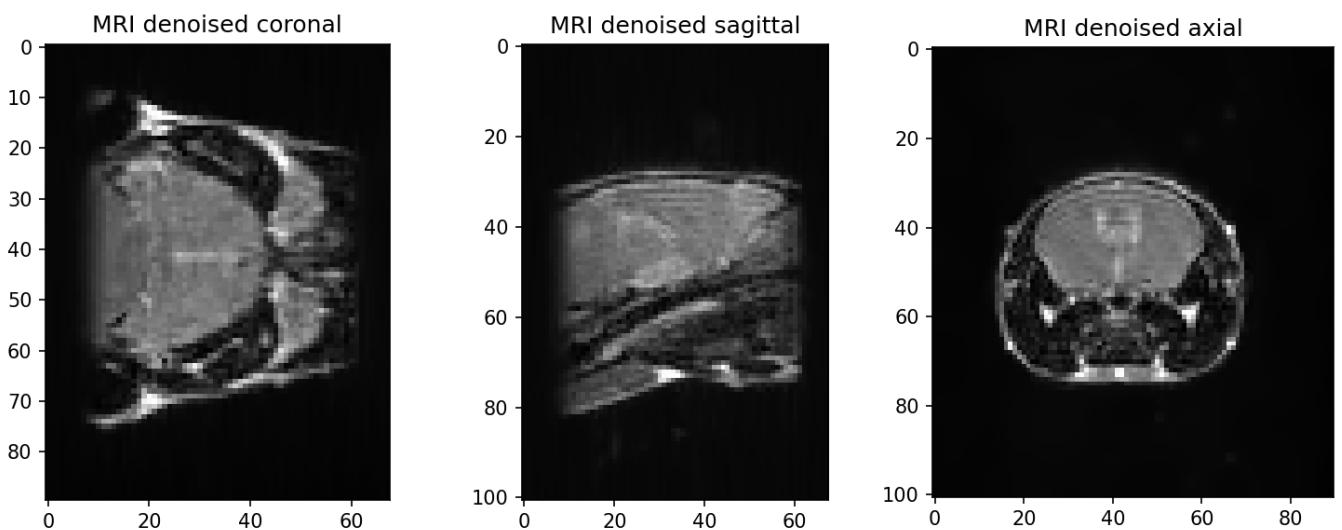


Figure 4.26: Denoised MRI image, Timepoint:Week\_05, Sequence type: T2

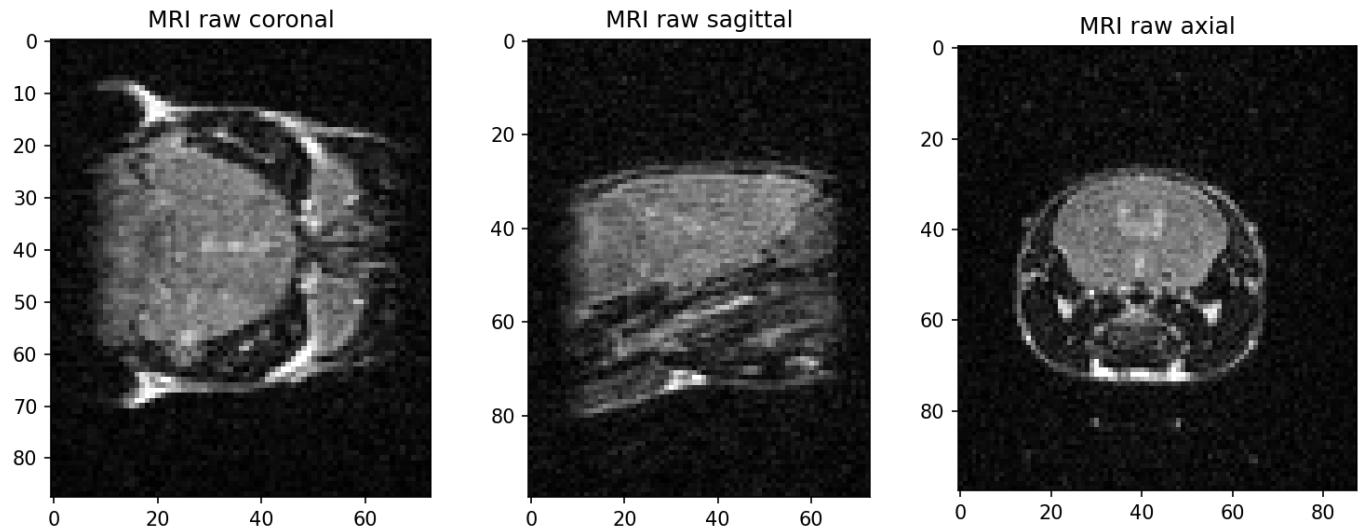


Figure 4.27: Raw MRI image, Timepoint:Week\_07, Sequence type: T2

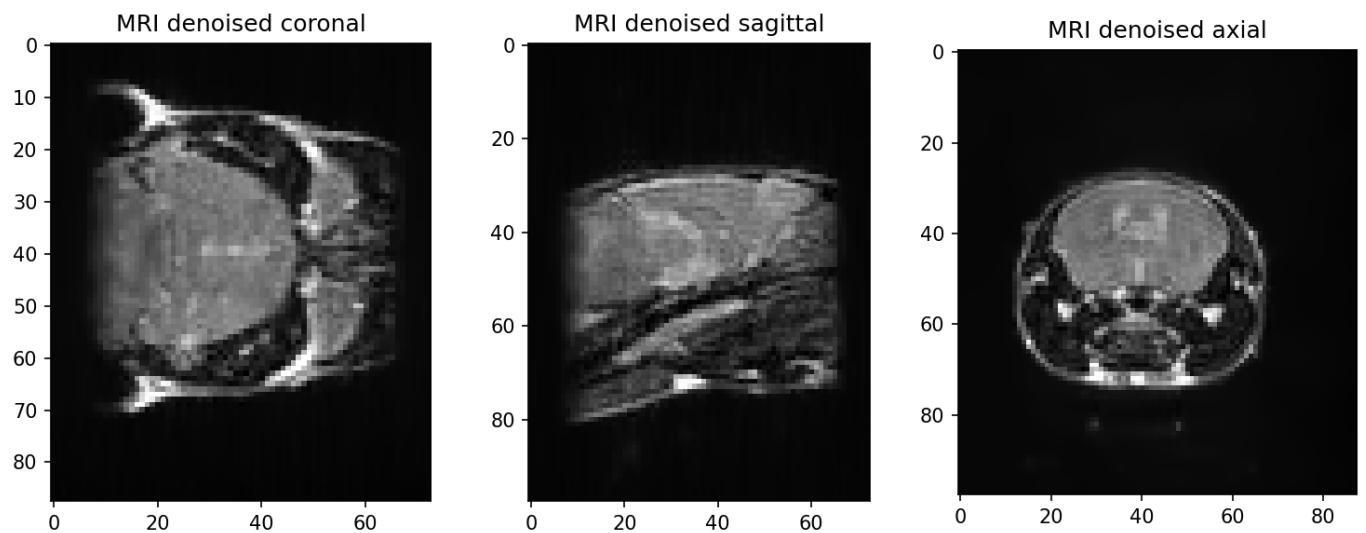


Figure 4.28: Denoised MRI image, Timepoint:Week\_07, Sequence type: T2

#### 4 MRI image data

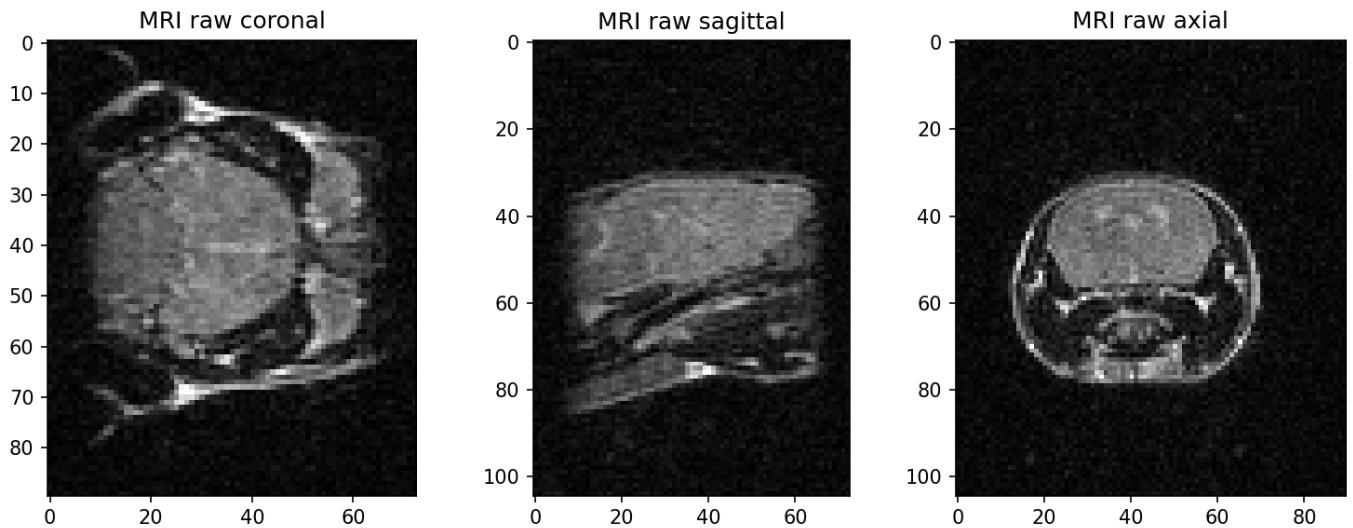


Figure 4.29: Raw MRI image, Timepoint:Week\_09, Sequence type: T2

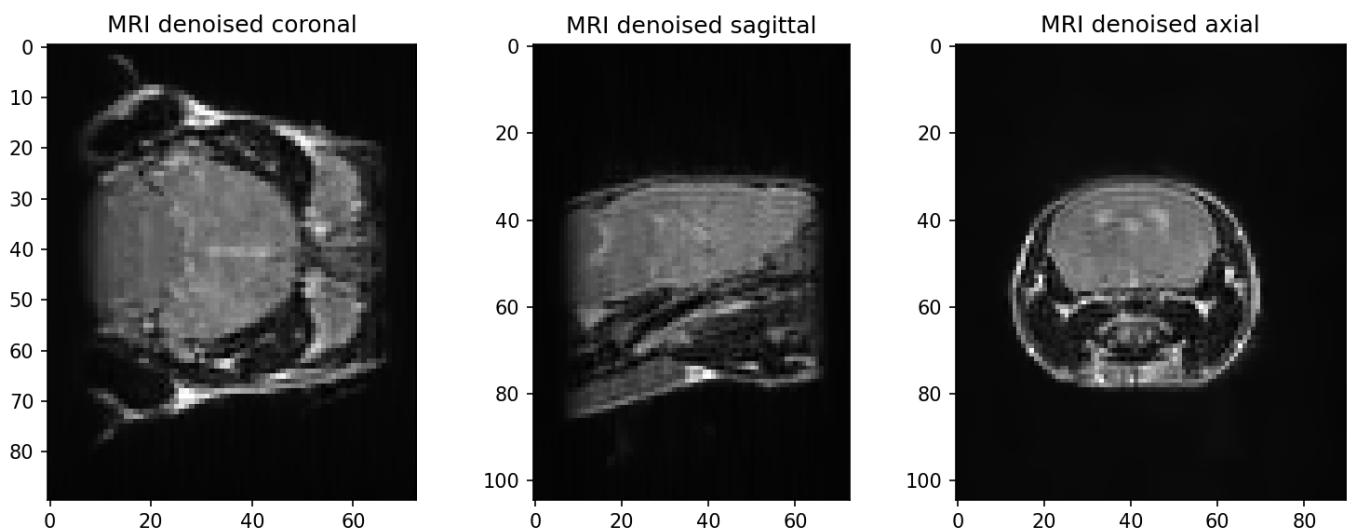


Figure 4.30: Denoised MRI image, Timepoint:Week\_09, Sequence type: T2

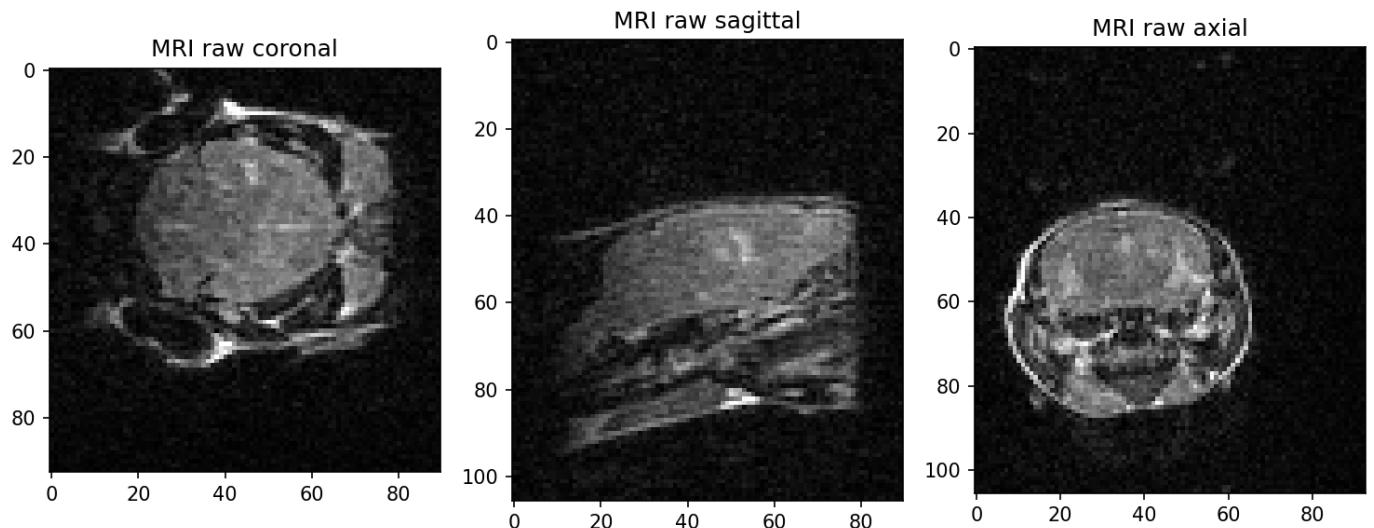


Figure 4.31: Raw MRI image, Timepoint:Week\_11, Sequence type: T2

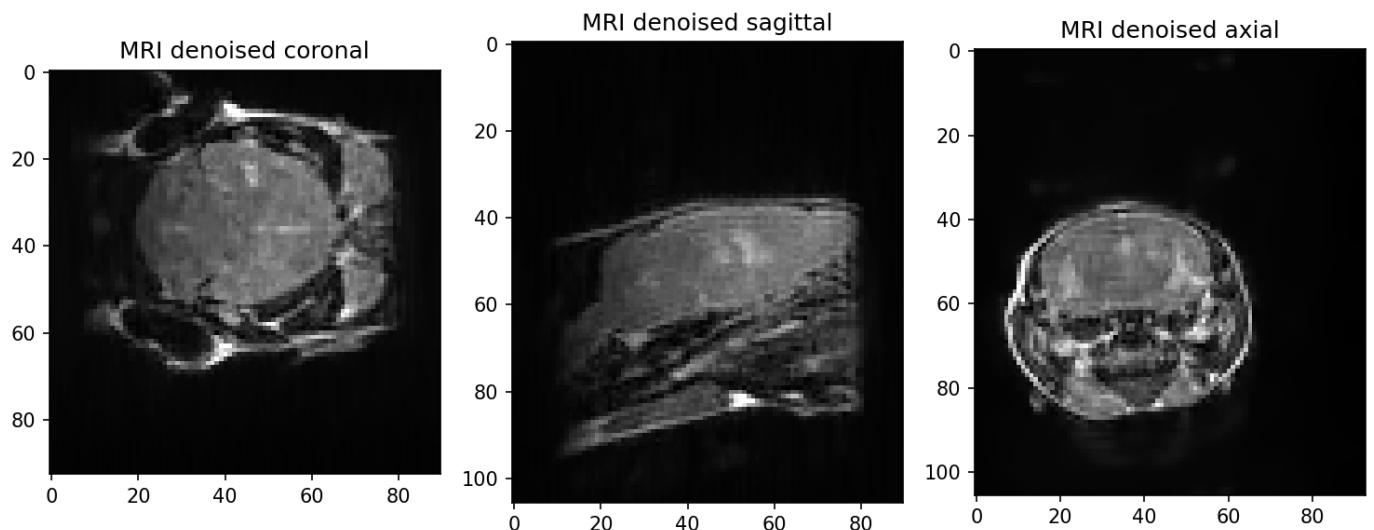


Figure 4.32: Denoised MRI image, Timepoint:Week\_11, Sequence type: T2

#### 4 MRI image data

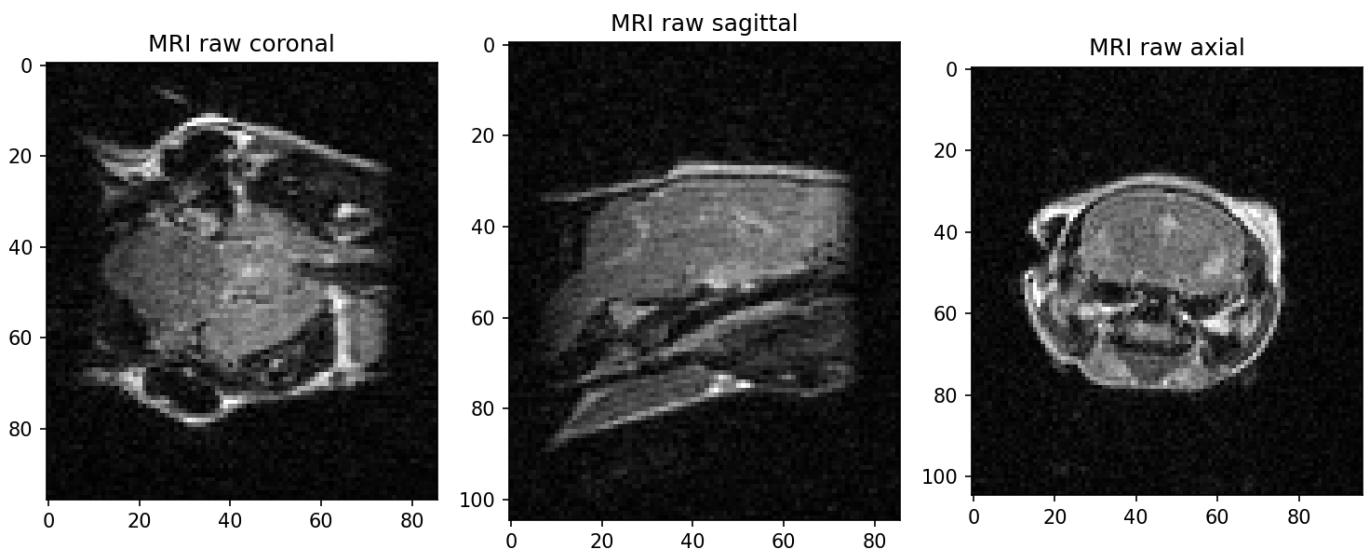


Figure 4.33: Raw MRI image, Timepoint:Week\_13, Sequence type: T2

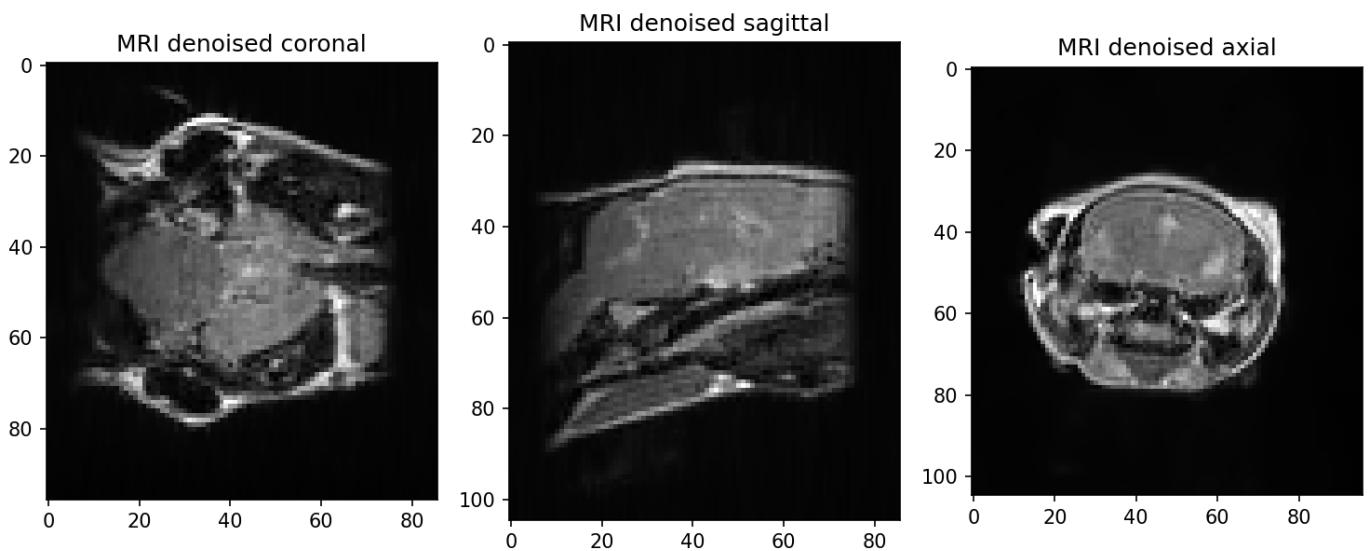


Figure 4.34: Denoised MRI image, Timepoint:Week\_13, Sequence type: T2

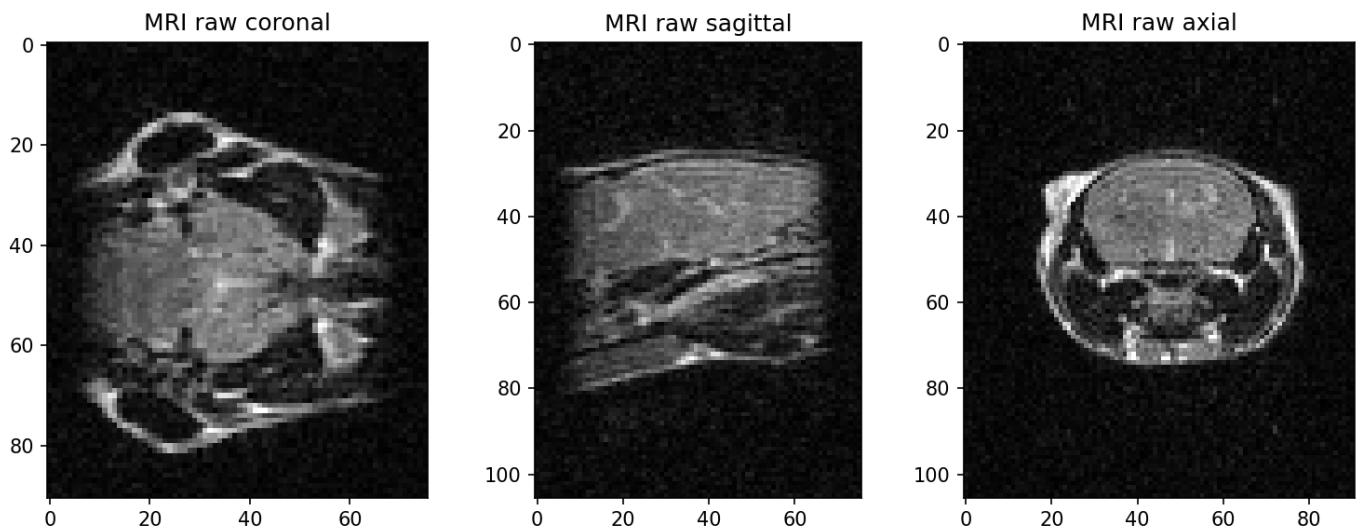


Figure 4.35: Raw MRI image, Timepoint:Week\_15, Sequence type: T2

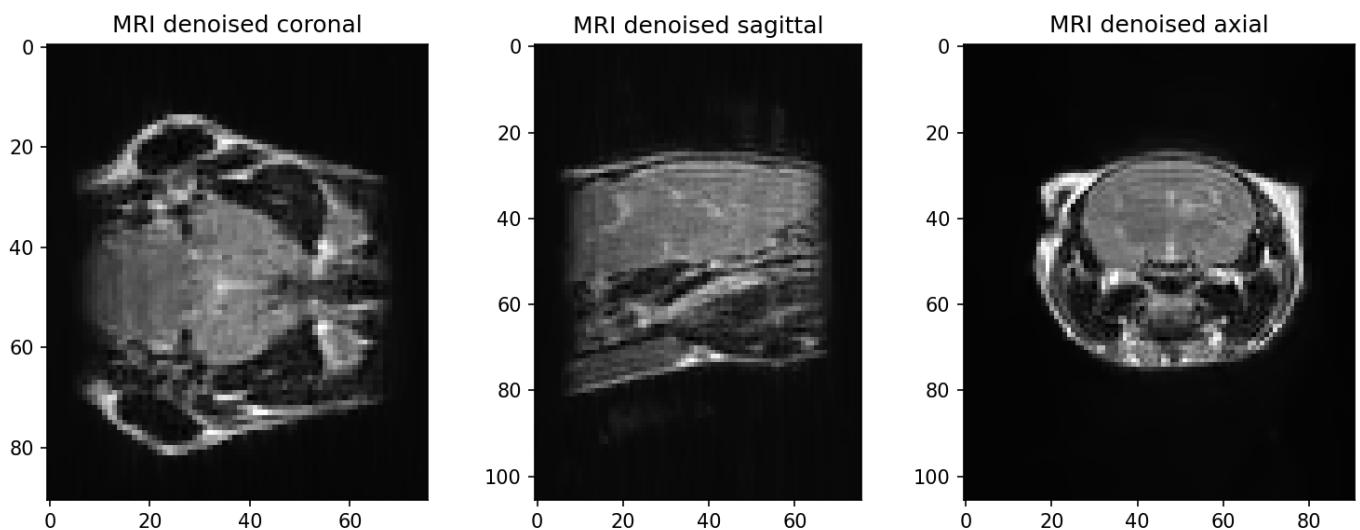


Figure 4.36: Denoised MRI image, Timepoint:Week\_15, Sequence type: T2

#### 4 MRI image data

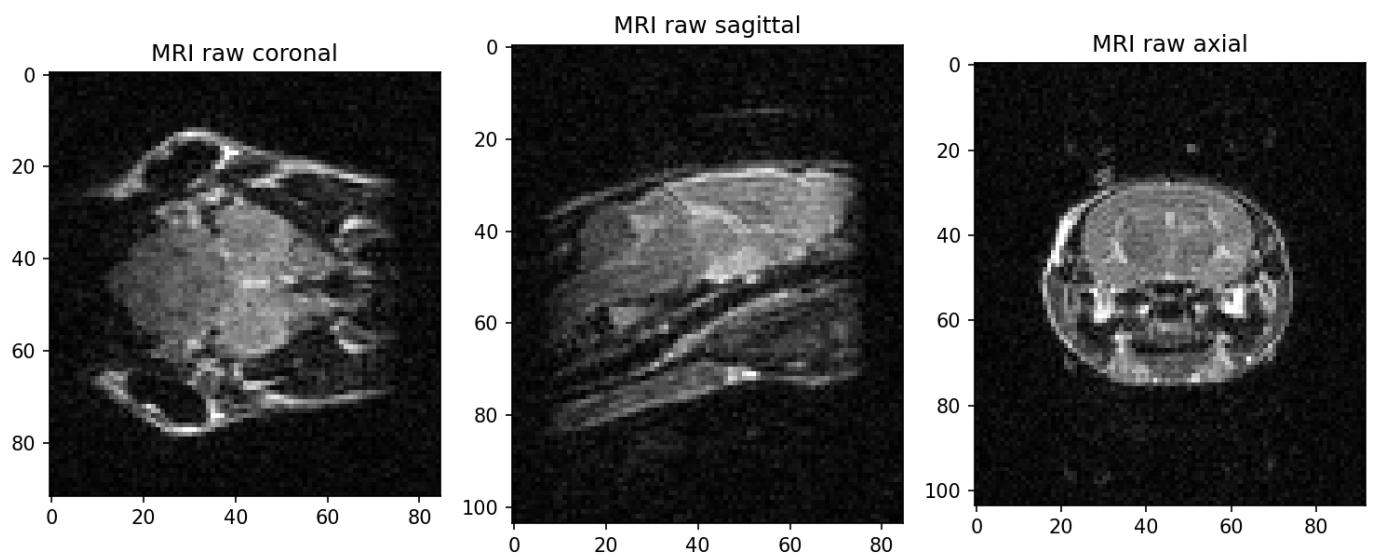


Figure 4.37: Raw MRI image, Timepoint:Week\_16, Sequence type: T2

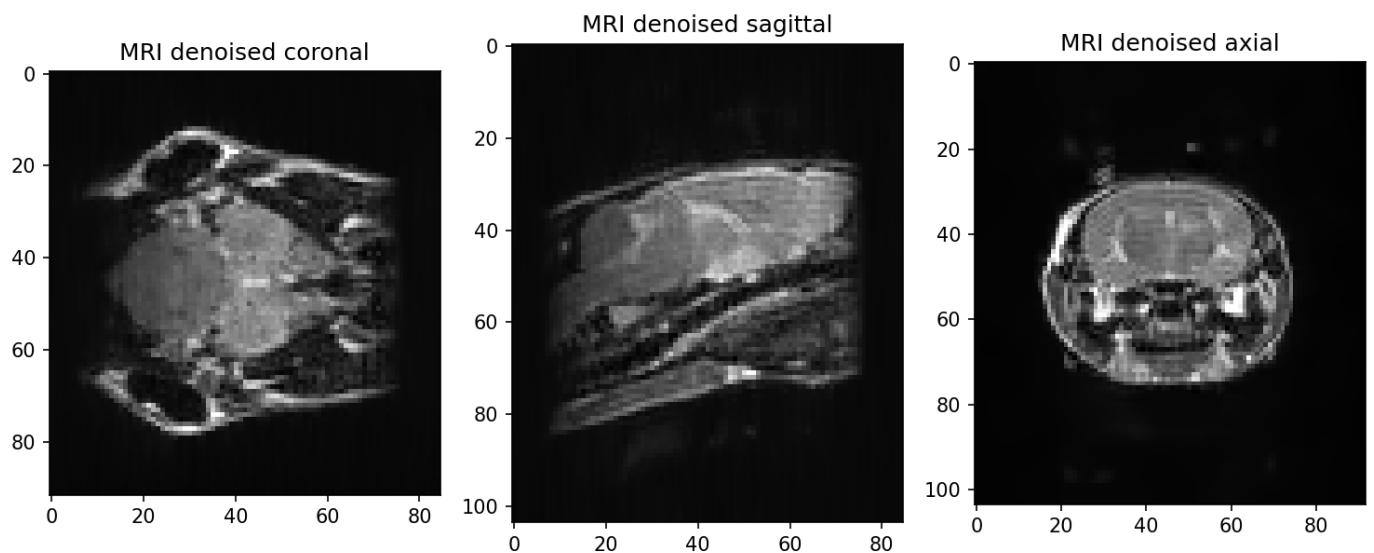


Figure 4.38: Denoised MRI image, Timepoint:Week\_16, Sequence type: T2

#### 4 MRI image data

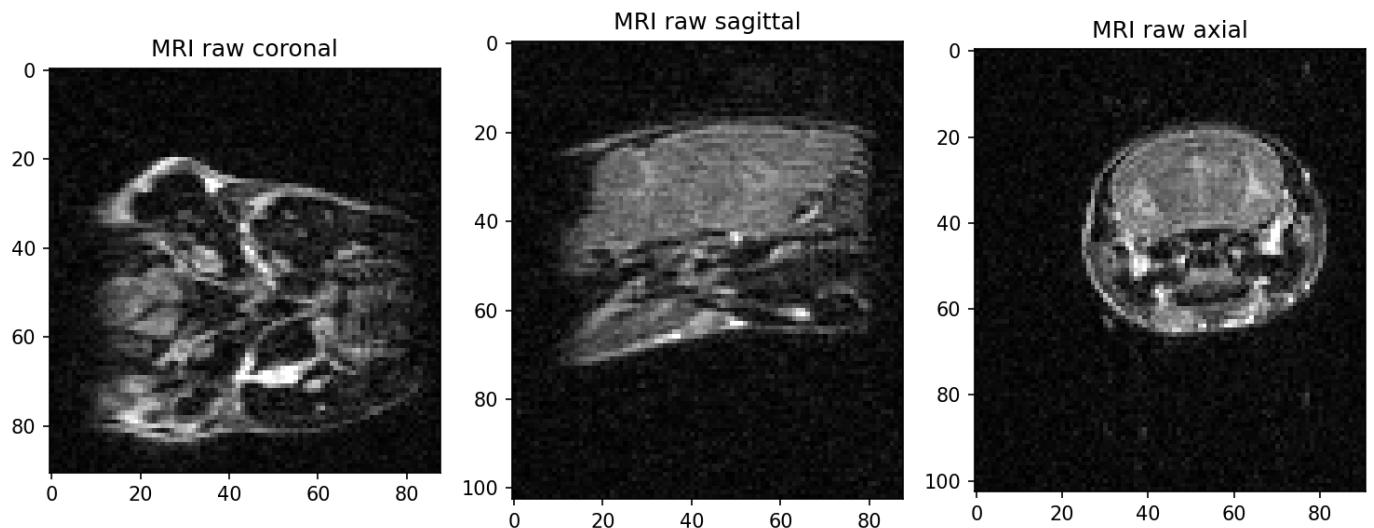


Figure 4.39: Raw MRI image, Timepoint:Week\_20, Sequence type: T2

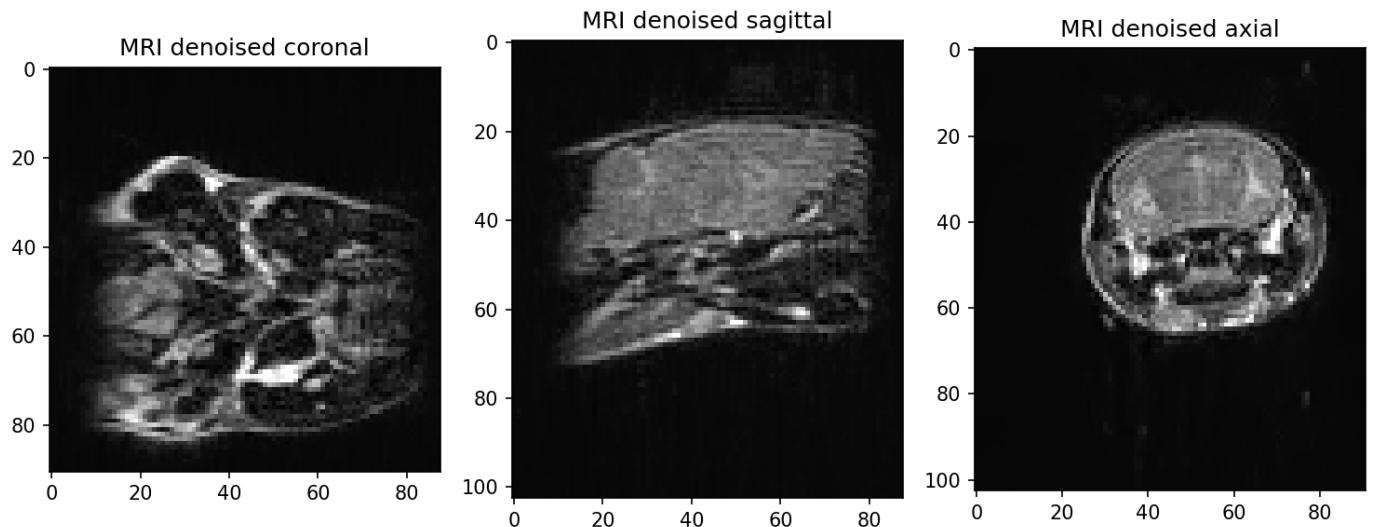


Figure 4.40: Denoised MRI image, Timepoint:Week\_20, Sequence type: T2

#### 4 MRI image data

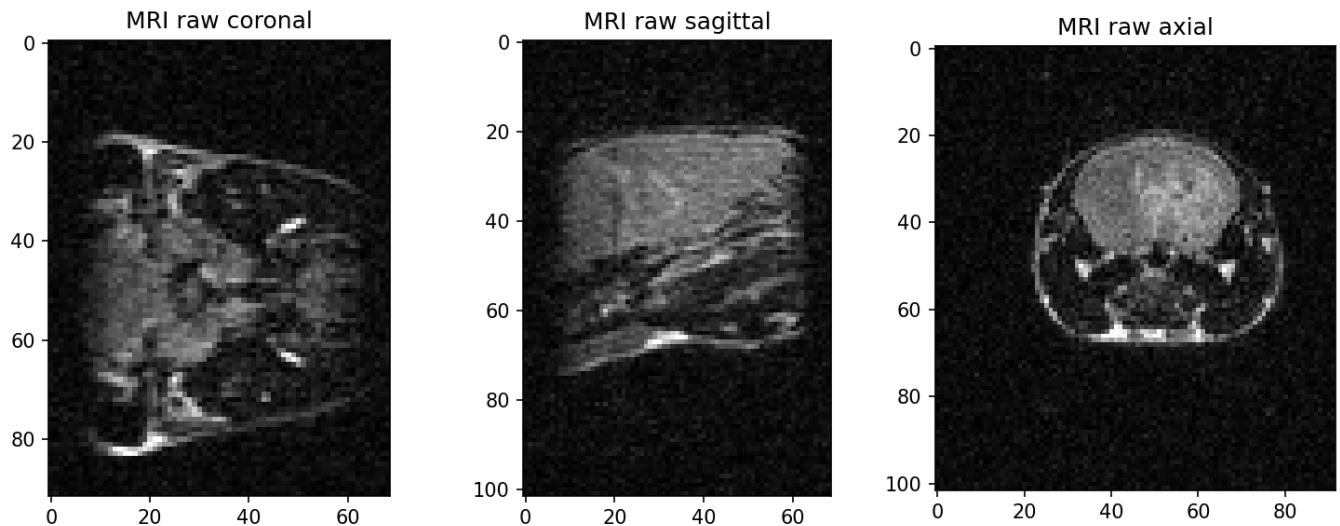


Figure 4.41: Raw MRI image, Timepoint:Week\_25, Sequence type: T2

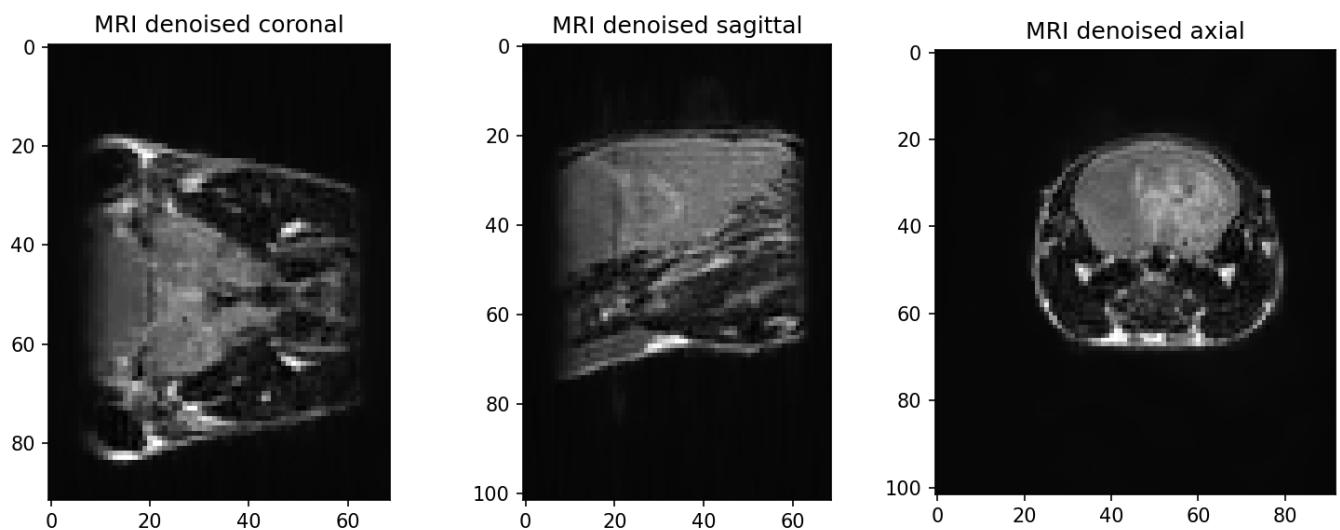


Figure 4.42: Denoised MRI image, Timepoint:Week\_25, Sequence type: T2

## 4.2 Registration (timepoints)

### 4.2.1 Sequence type: T1

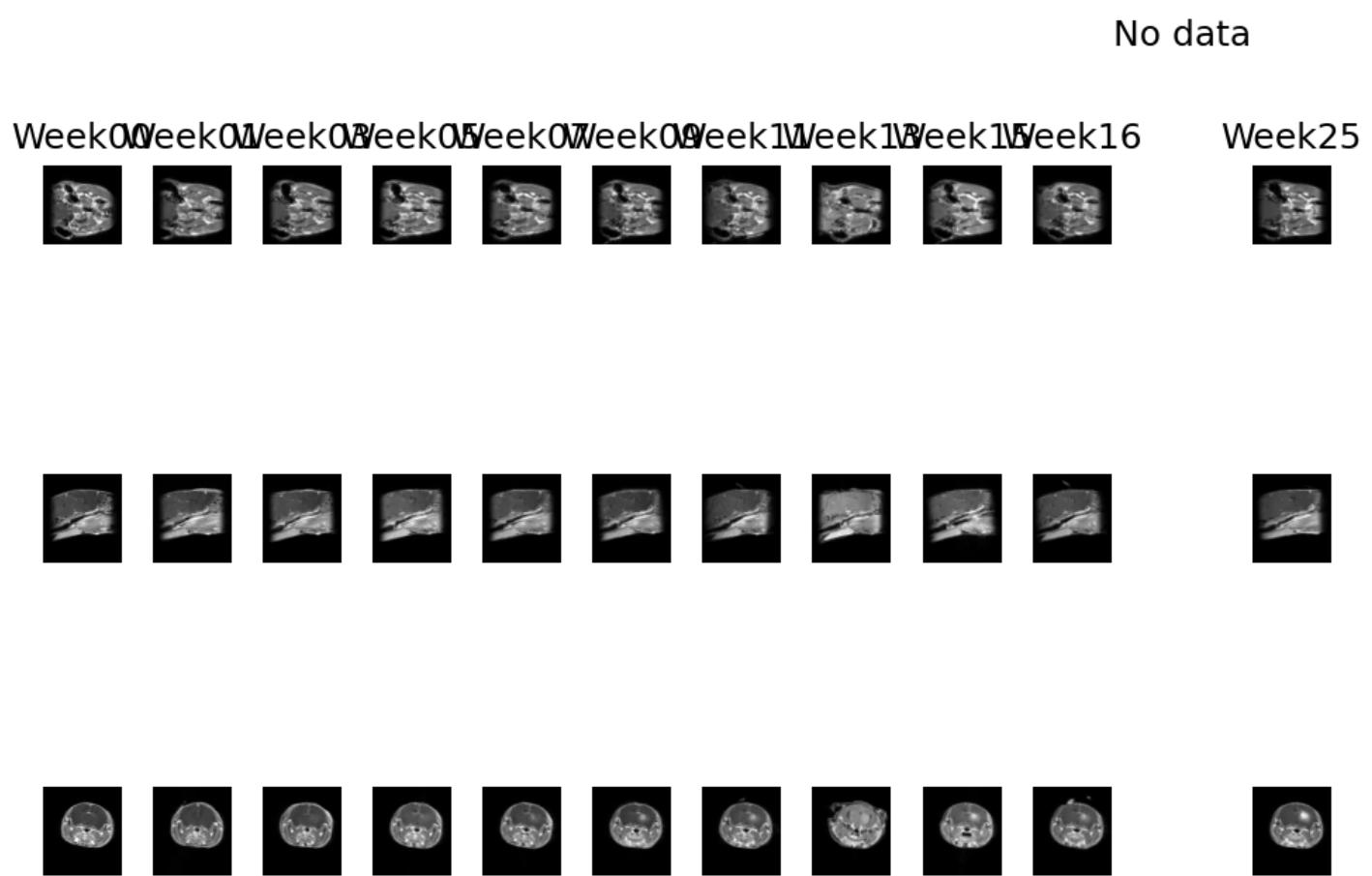


Figure 4.43: Gallery of registered MRI images , Sequence type: T1

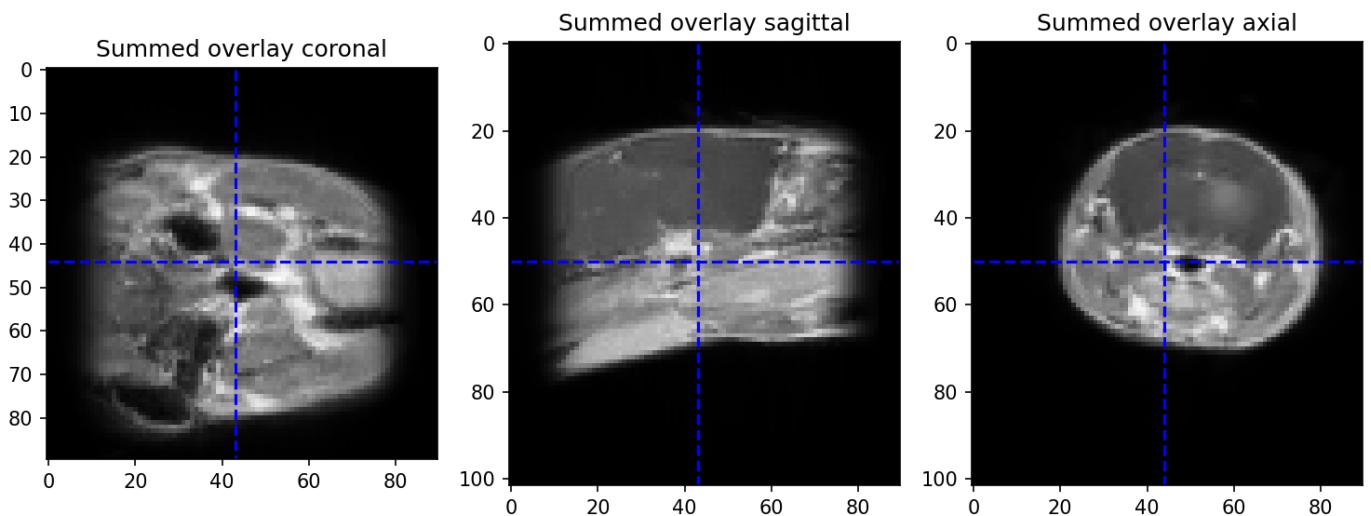


Figure 4.44: Summed overlay of registered MRI images , Sequence type: T1

#### 4.2.2 Sequence type: T2

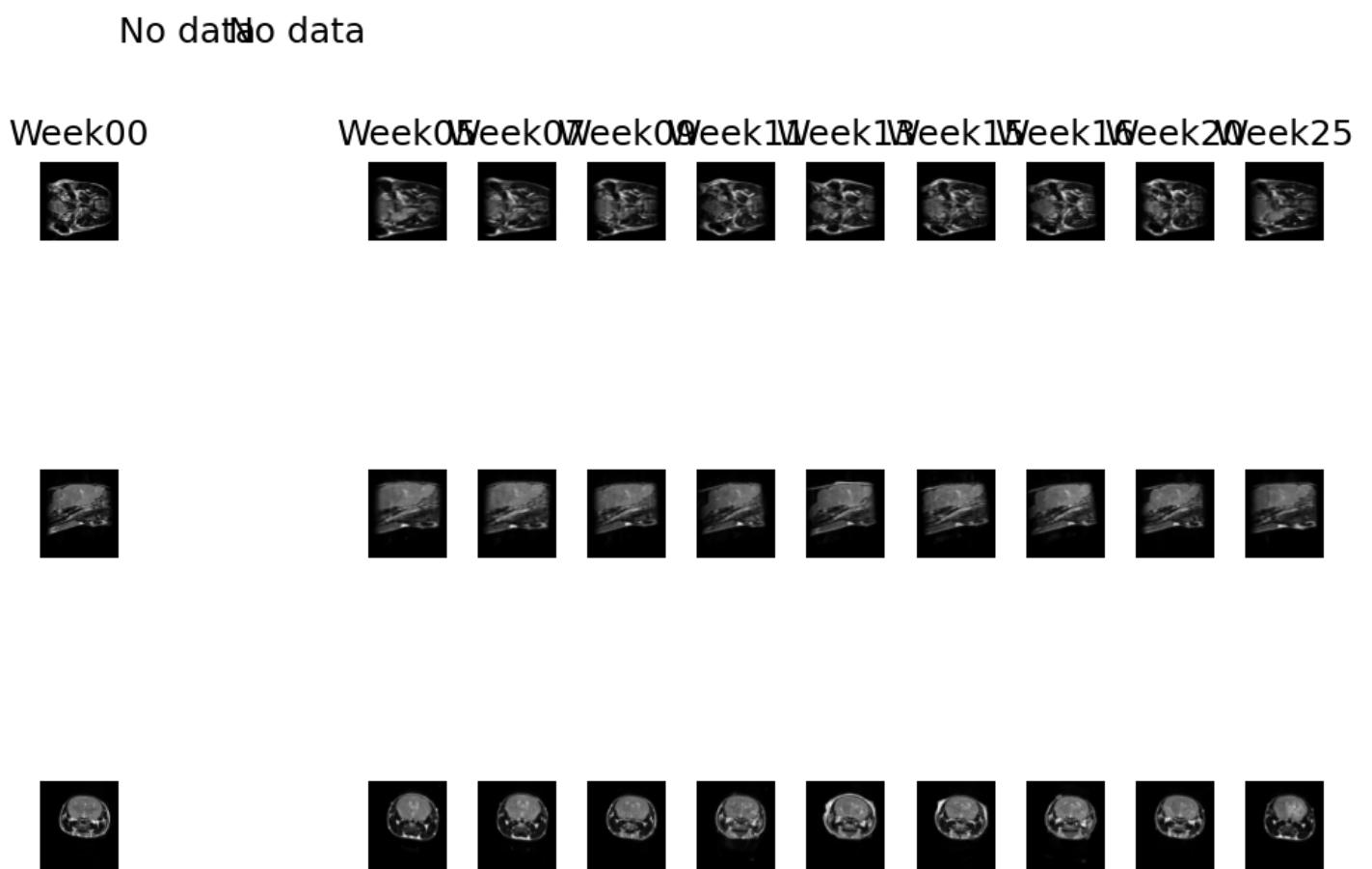


Figure 4.45: Gallery of registered MRI images , Sequence type: T2

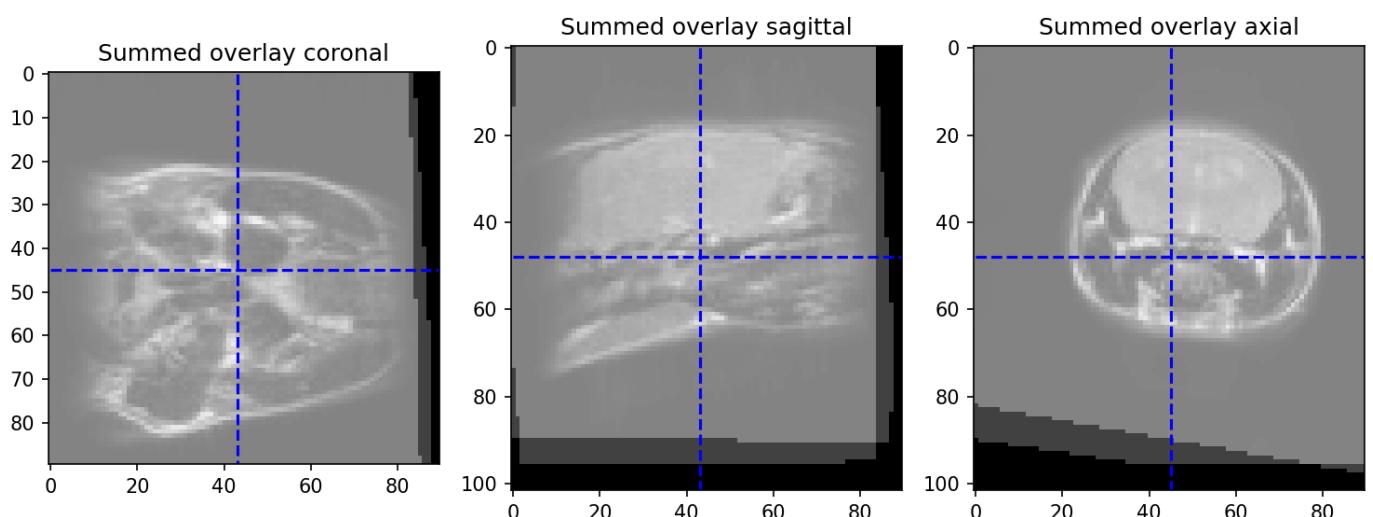


Figure 4.46: Summed overlay of registered MRI images , Sequence type: T2

## 4.3 Warping to CBCT

### 4 MRI image data

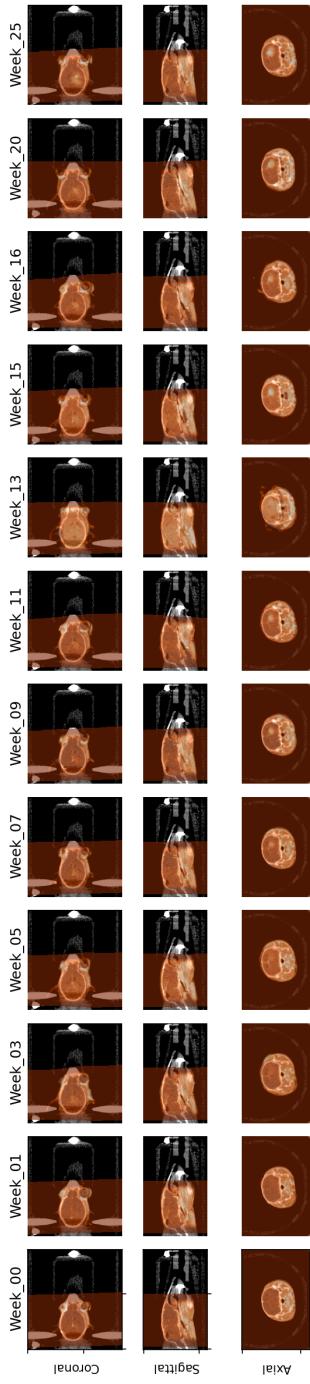


Figure 4.47: Gallery of CBCT (gray) and warped MRI images (orange), Sequence type: T1

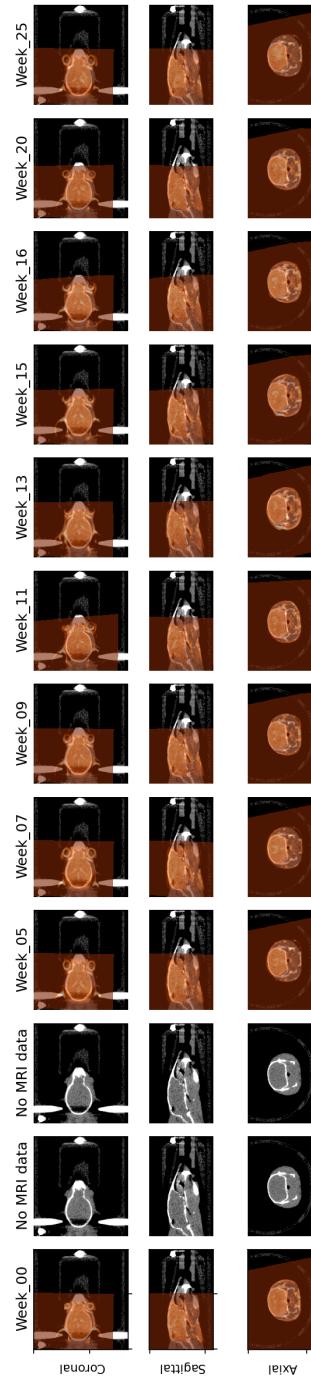


Figure 4.48: Gallery of CBCT (gray) and warped MRI images (orange), Sequence type: T2

## 5 Histology image data

### 5.1 Bundle registration

Number of section locations: 27

Stainings for this sample:

- NOK: NeuN, OSP, Ki-67 and DAPI
- GNI: GFAP, Nestin, Iba1 and DAPI
- HE: Hematoxylin & eosin staining

**Note:** Pairs of histochemical (e.g. HE) and immunofluorescent (e.g. GNI) images are registered with a contour-based technique, whereas pairs of immunofluorescent images (e.g. GNI and NOK) are registered with an intensity-based method. For the latter, the DAPI canal present in all immunofluorescent stainings serves as registration reference and is displayed in this overview.

#### 5.1.1 0001\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0001-Scene-1.czi
- P2A\_B6\_M2\_HE-0001-Scene-1.czi
- P2A\_B6\_M2\_NOK-0001-Scene-1.czi

Registered stainings: 3/3

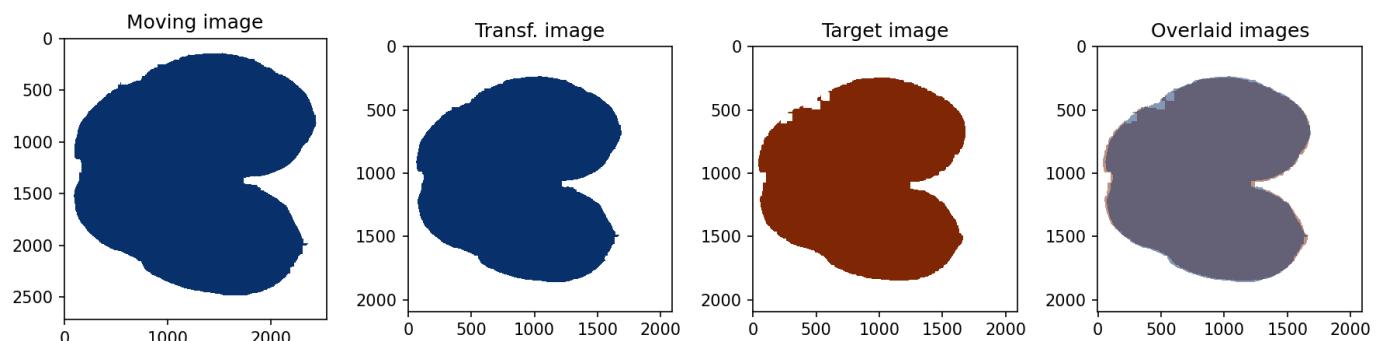


Figure 5.1: Results of registration of image P2A\_B6\_M2\_HE-0001-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0001-Scene-1 (Target image)

## 5 Histology image data

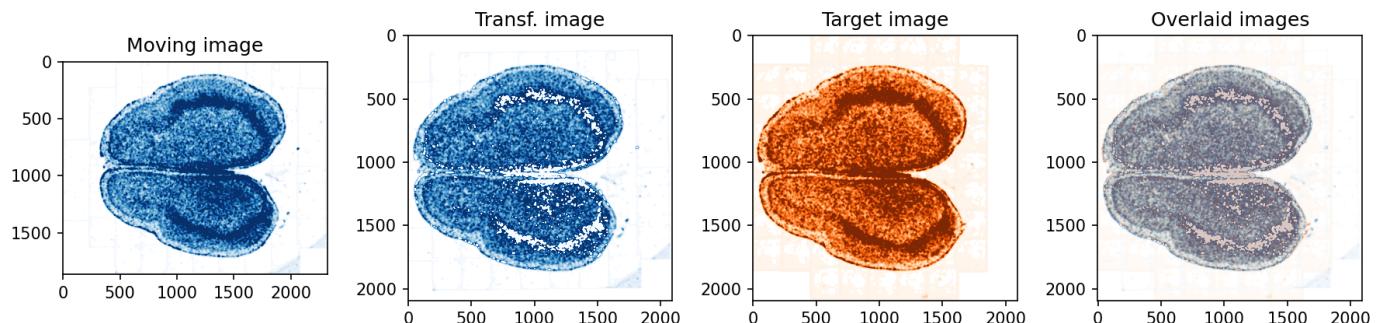


Figure 5.2: Results of registration of image P2A\_B6\_M2\_NOK-0001-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0001-Scene-1 (Target image)

### 5.1.2 0001\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0001-Scene-2.czi
- P2A\_B6\_M2\_HE-0001-Scene-2.czi
- P2A\_B6\_M2\_NOK-0001-Scene-2.czi

Registered stainings: 3/3

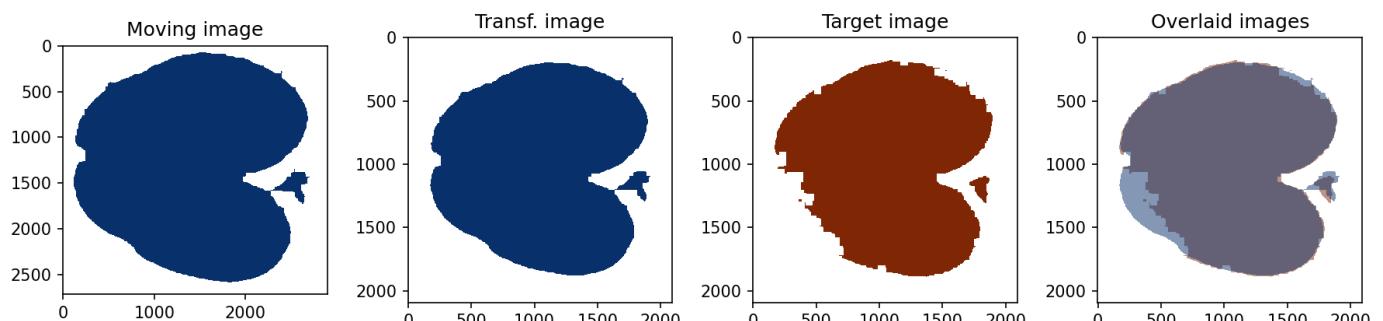


Figure 5.3: Results of registration of image P2A\_B6\_M2\_HE-0001-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0001-Scene-2 (Target image)

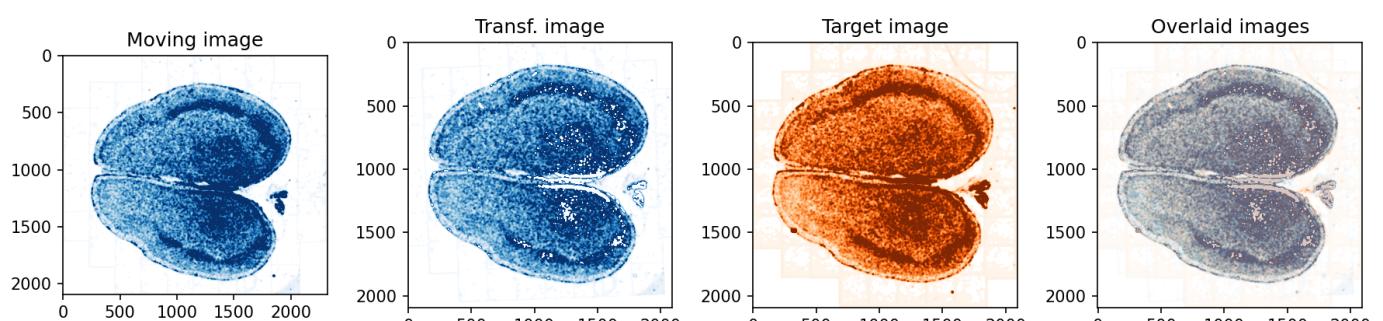


Figure 5.4: Results of registration of image P2A\_B6\_M2\_NOK-0001-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0001-Scene-2 (Target image)

### 5.1.3 0002\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0002-Scene-1.czi
- P2A\_B6\_M2\_HE-0002-Scene-1.czi
- P2A\_B6\_M2\_NOK-0002-Scene-1.czi

Registered stainings: 3/3

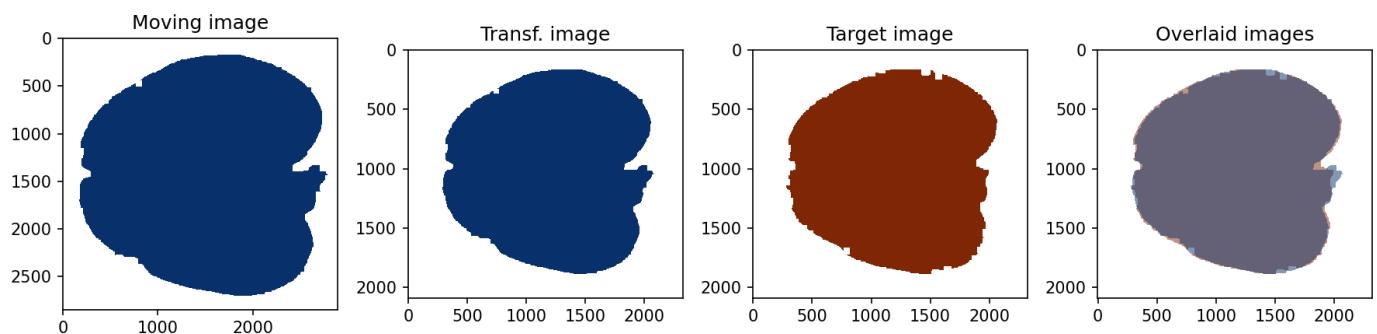


Figure 5.5: Results of registration of image P2A\_B6\_M2\_HE-0002-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0002-Scene-1 (Target image)

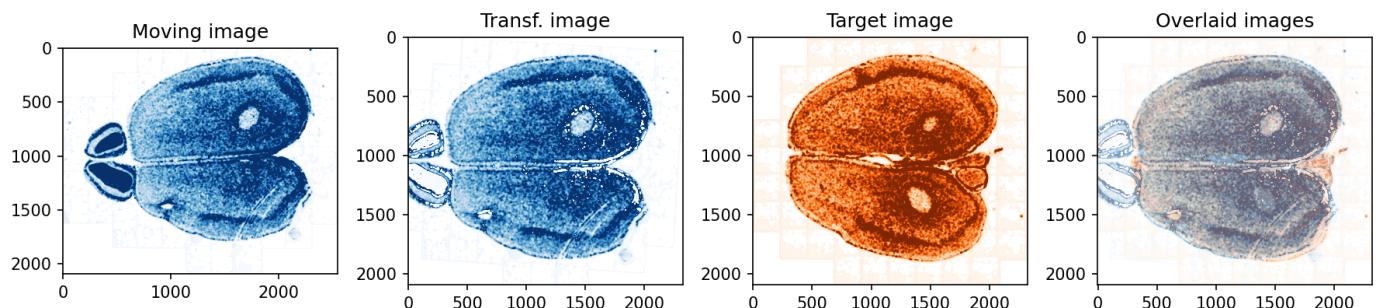


Figure 5.6: Results of registration of image P2A\_B6\_M2\_NOK-0002-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0002-Scene-1 (Target image)

### 5.1.4 0002\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0002-Scene-2.czi
- P2A\_B6\_M2\_HE-0002-Scene-2.czi
- P2A\_B6\_M2\_NOK-0002-Scene-2.czi

Registered stainings: 3/3

## 5 Histology image data

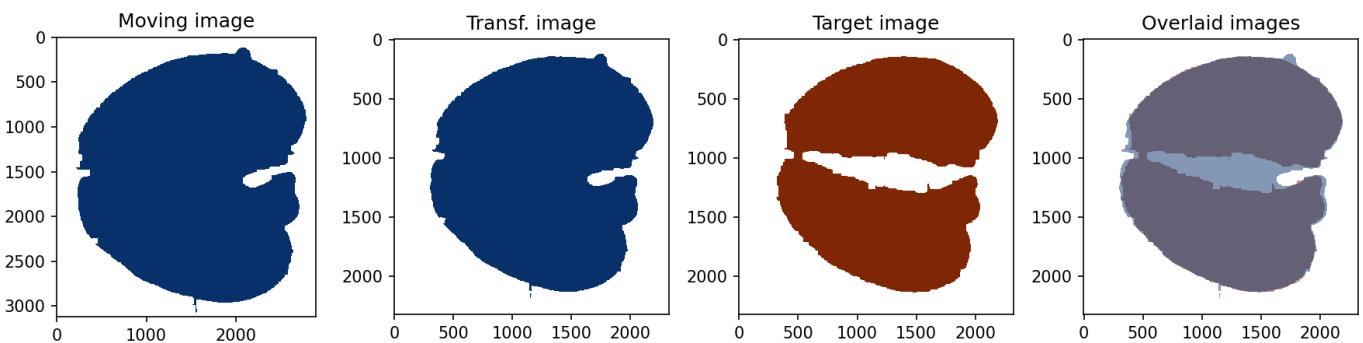


Figure 5.7: Results of registration of image P2A\_B6\_M2\_HE-0002-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0002-Scene-2 (Target image)

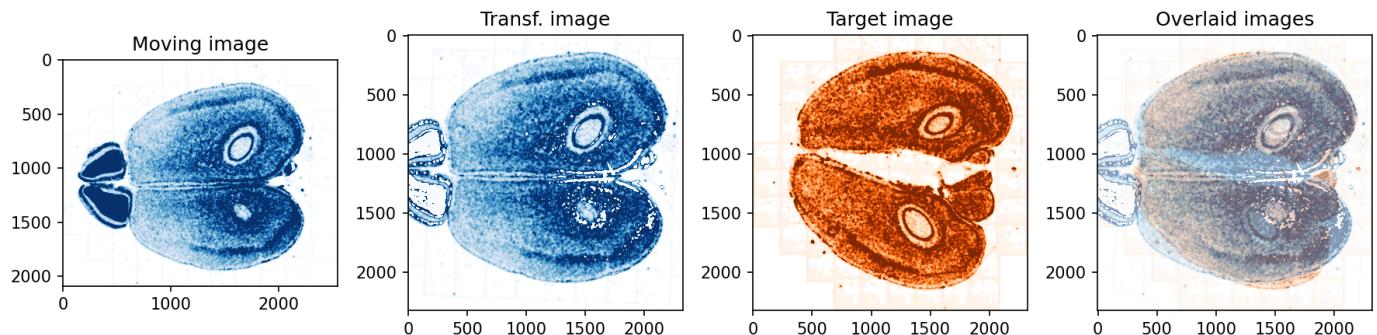


Figure 5.8: Results of registration of image P2A\_B6\_M2\_NOK-0002-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0002-Scene-2 (Target image)

### 5.1.5 0003\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0003-Scene-1.czi
- P2A\_B6\_M2\_HE-0003-Scene-1.czi
- P2A\_B6\_M2\_NOK-0003-Scene-1.czi

Registered stainings: 3/3

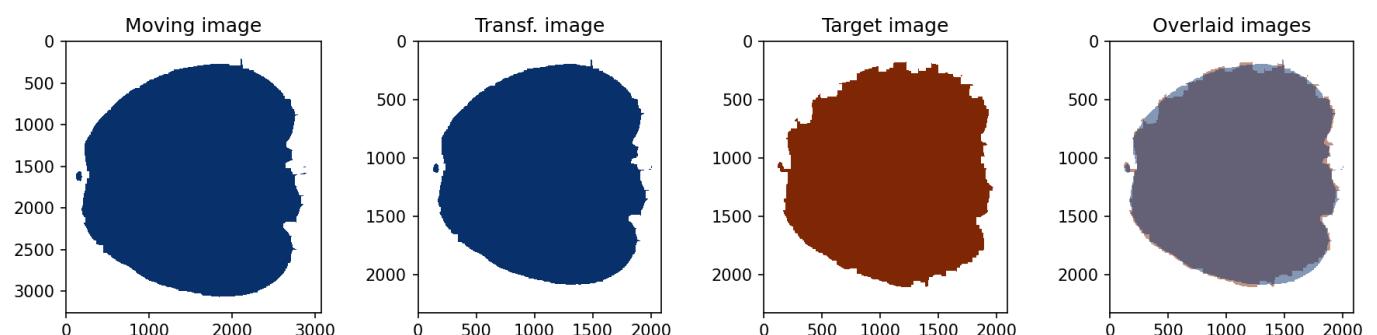


Figure 5.9: Results of registration of image P2A\_B6\_M2\_HE-0003-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0003-Scene-1 (Target image)

## 5 Histology image data

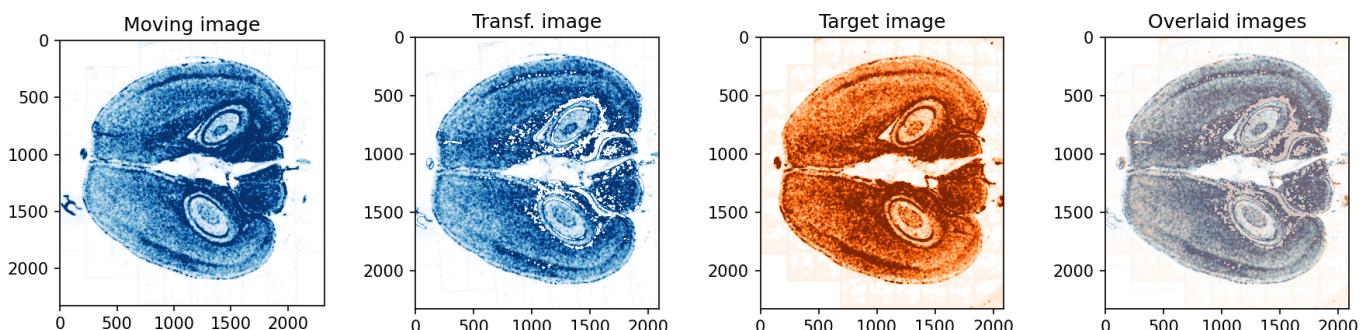


Figure 5.10: Results of registration of image P2A\_B6\_M2\_NOK-0003-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0003-Scene-1 (Target image)

### 5.1.6 0003\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0003-Scene-2.czi
- P2A\_B6\_M2\_HE-0003-Scene-2.czi
- P2A\_B6\_M2\_NOK-0003-Scene-2.czi

Registered stainings: 3/3

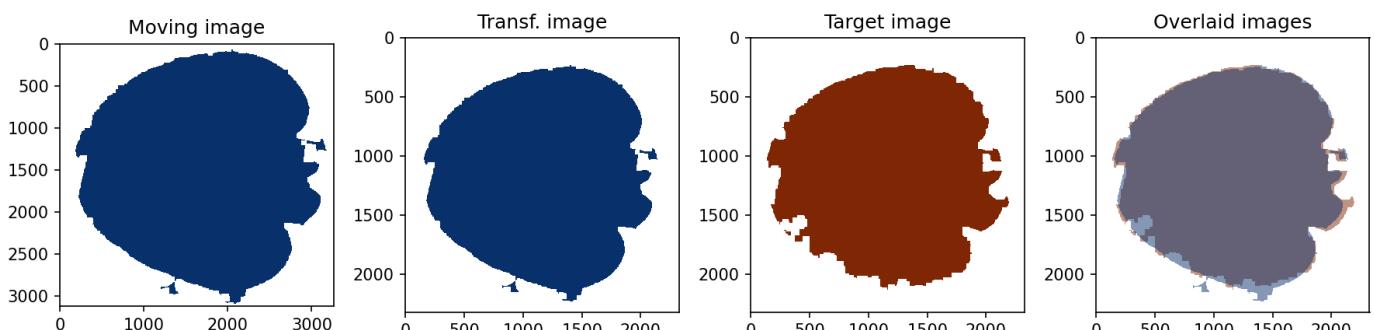


Figure 5.11: Results of registration of image P2A\_B6\_M2\_HE-0003-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0003-Scene-2 (Target image)

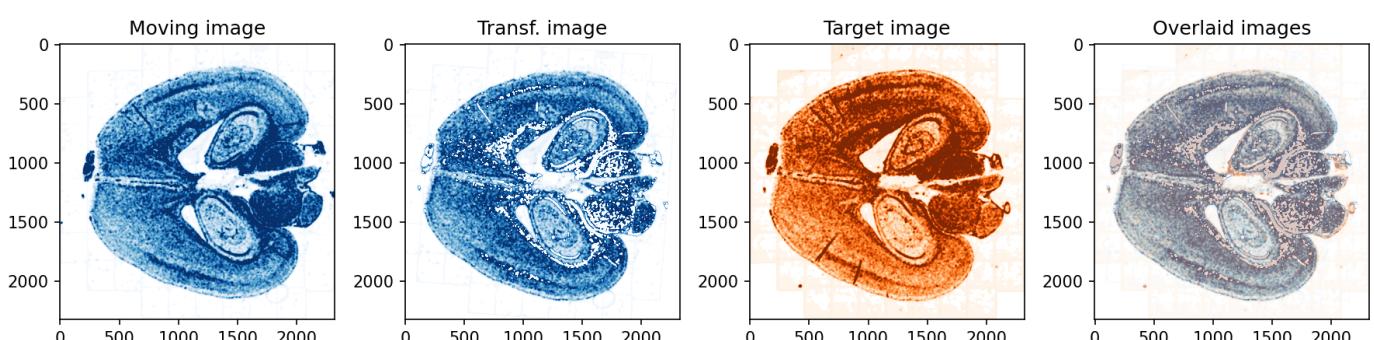


Figure 5.12: Results of registration of image P2A\_B6\_M2\_NOK-0003-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0003-Scene-2 (Target image)

### 5.1.7 0004\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0004-Scene-1.czi
- P2A\_B6\_M2\_HE-0004-Scene-1.czi
- P2A\_B6\_M2\_NOK-0004-Scene-1.czi

Registered stainings: 3/3

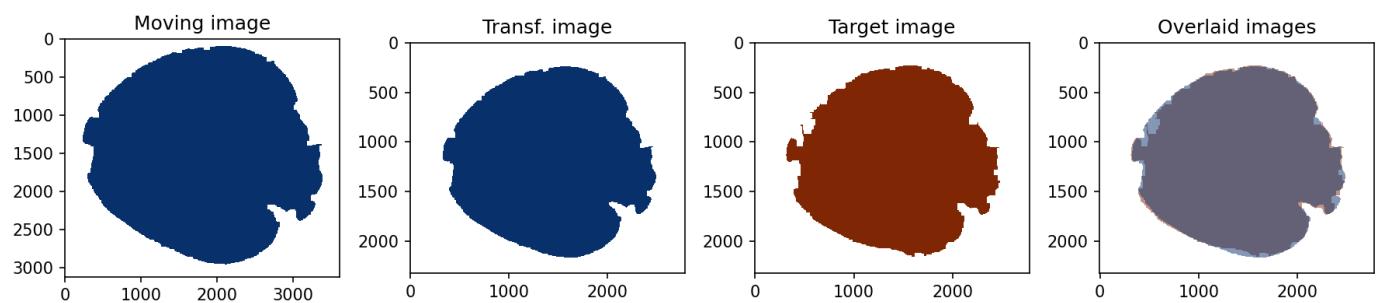


Figure 5.13: Results of registration of image P2A\_B6\_M2\_HE-0004-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0004-Scene-1 (Target image)

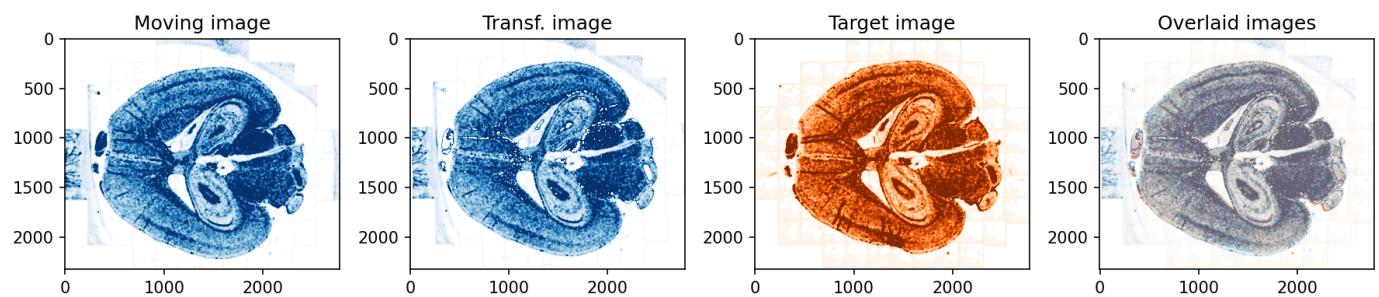


Figure 5.14: Results of registration of image P2A\_B6\_M2\_NOK-0004-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0004-Scene-1 (Target image)

### 5.1.8 0004\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0004-Scene-2.czi
- P2A\_B6\_M2\_HE-0004-Scene-2.czi
- P2A\_B6\_M2\_NOK-0004-Scene-2.czi

Registered stainings: 3/3

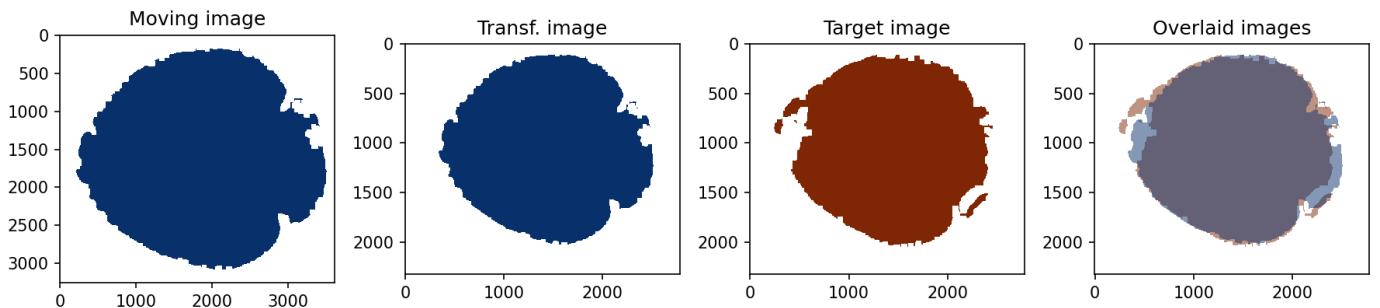


Figure 5.15: Results of registration of image P2A\_B6\_M2\_HE-0004-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0004-Scene-2 (Target image)

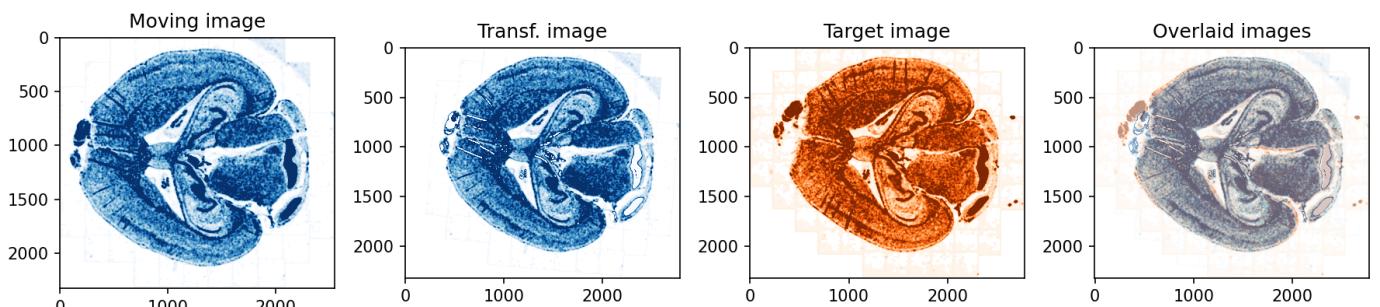


Figure 5.16: Results of registration of image P2A\_B6\_M2\_NOK-0004-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0004-Scene-2 (Target image)

### 5.1.9 0005\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0005-Scene-1.czi
- P2A\_B6\_M2\_HE-0005-Scene-1.czi
- P2A\_B6\_M2\_NOK-0005-Scene-1.czi

Registered stainings: 3/3

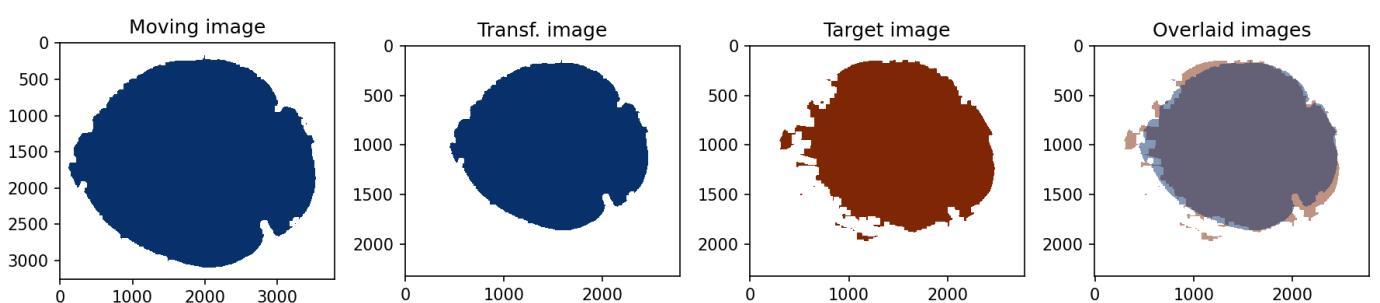


Figure 5.17: Results of registration of image P2A\_B6\_M2\_HE-0005-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0005-Scene-1 (Target image)

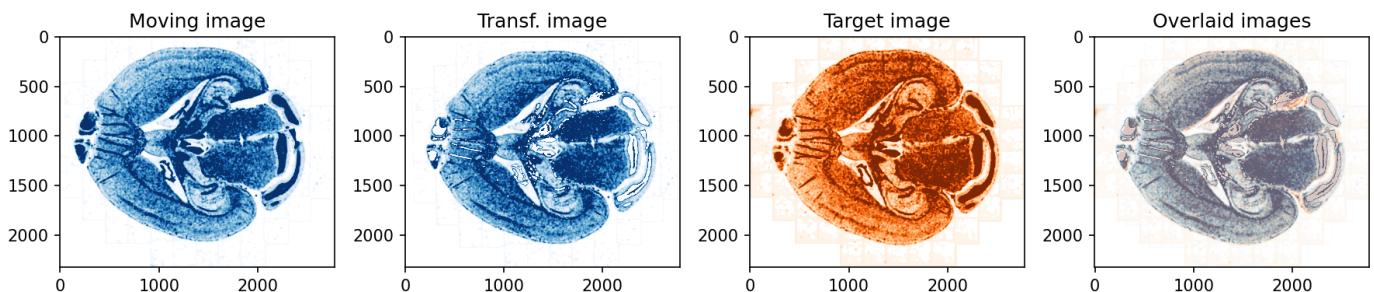


Figure 5.18: Results of registration of image P2A\_B6\_M2\_NOK-0005-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0005-Scene-1 (Target image)

### 5.1.10 0005\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0005-Scene-2.czi
- P2A\_B6\_M2\_HE-0005-Scene-2.czi
- P2A\_B6\_M2\_NOK-0005-Scene-2.czi

Registered stainings: 3/3

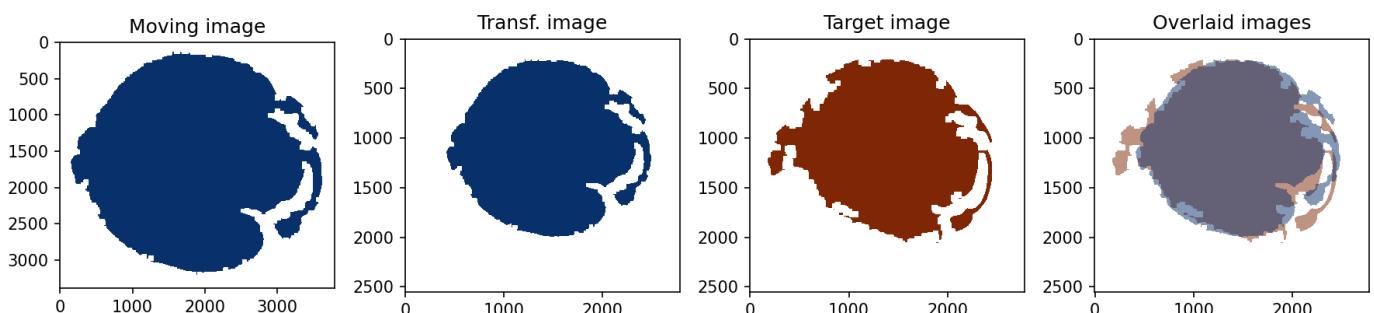


Figure 5.19: Results of registration of image P2A\_B6\_M2\_HE-0005-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0005-Scene-2 (Target image)

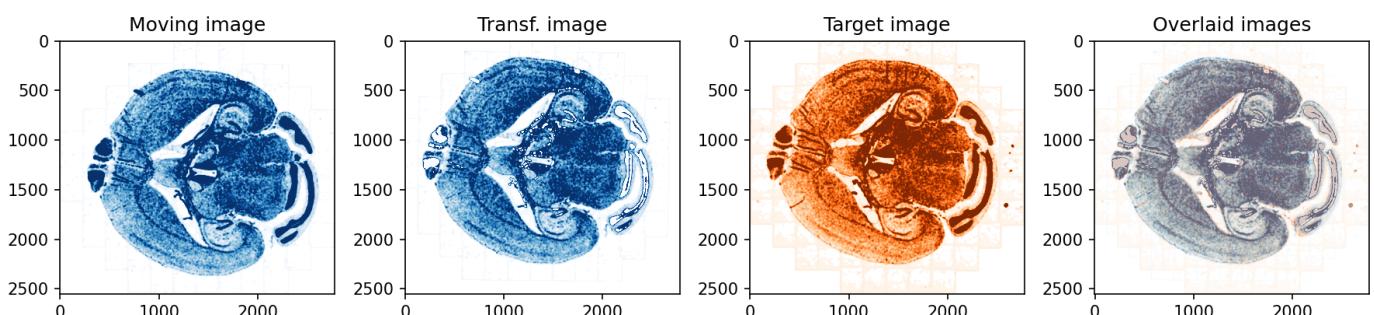


Figure 5.20: Results of registration of image P2A\_B6\_M2\_NOK-0005-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0005-Scene-2 (Target image)

### 5.1.11 0006\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0006-Scene-1.czi
- P2A\_B6\_M2\_HE-0006-Scene-1.czi
- P2A\_B6\_M2\_NOK-0006-Scene-1.czi

Registered stainings: 3/3

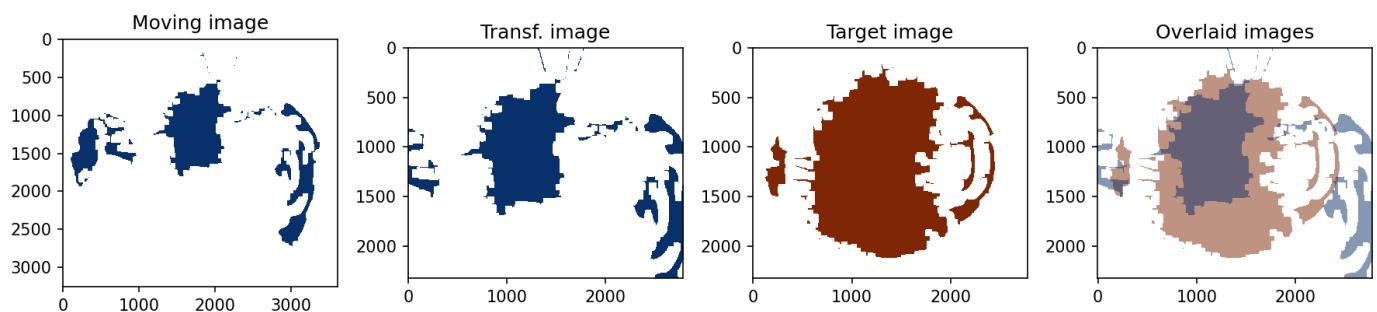


Figure 5.21: Results of registration of image P2A\_B6\_M2\_HE-0006-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0006-Scene-1 (Target image)

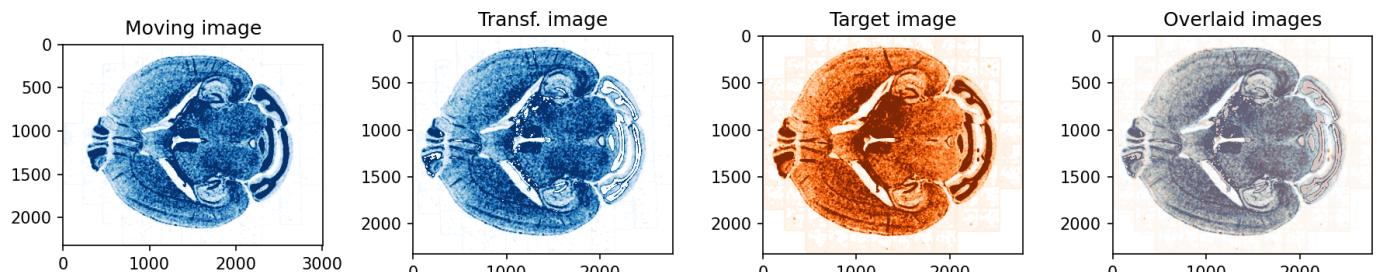


Figure 5.22: Results of registration of image P2A\_B6\_M2\_NOK-0006-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0006-Scene-1 (Target image)

### 5.1.12 0006\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0006-Scene-2.czi
- P2A\_B6\_M2\_HE-0006-Scene-2.czi
- P2A\_B6\_M2\_NOK-0006-Scene-2.czi

Registered stainings: 3/3

## 5 Histology image data

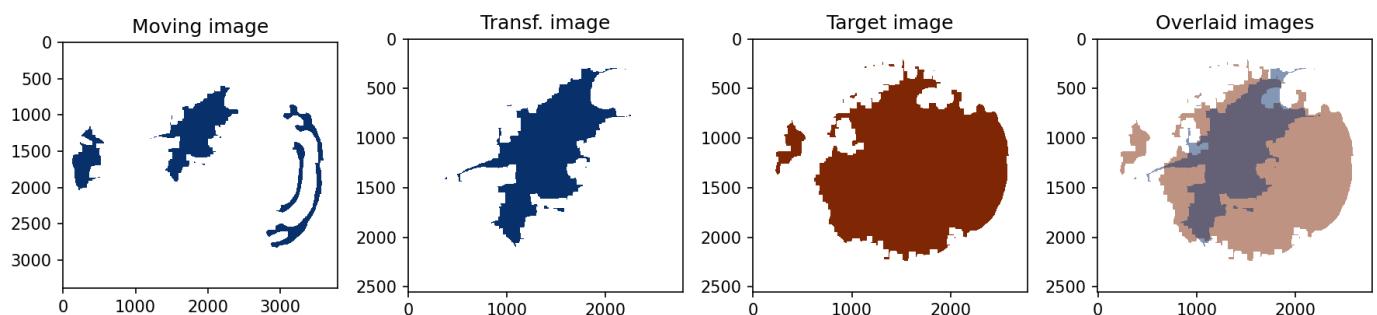


Figure 5.23: Results of registration of image P2A\_B6\_M2\_HE-0006-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0006-Scene-2 (Target image)

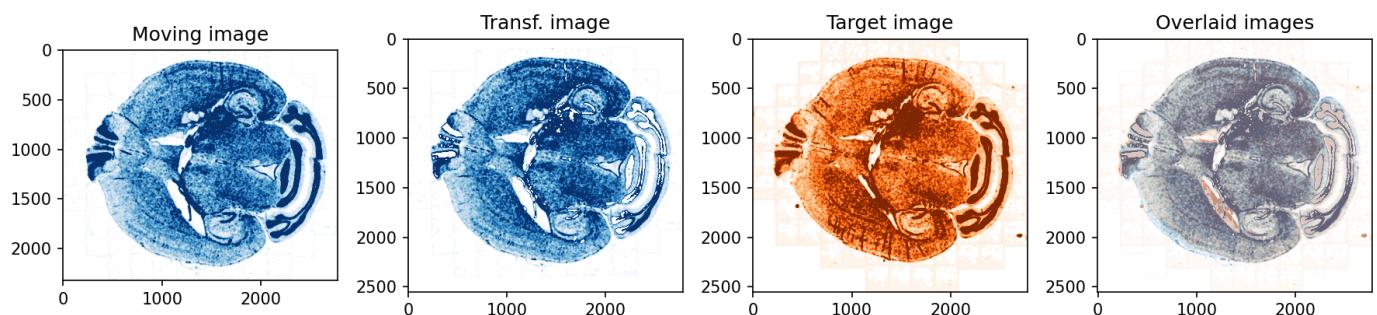


Figure 5.24: Results of registration of image P2A\_B6\_M2\_NOK-0006-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0006-Scene-2 (Target image)

### 5.1.13 0007\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0007-Scene-1.czi
- P2A\_B6\_M2\_HE-0007-Scene-1.czi
- P2A\_B6\_M2\_NOK-0007-Scene-1.czi

Registered stainings: 3/3

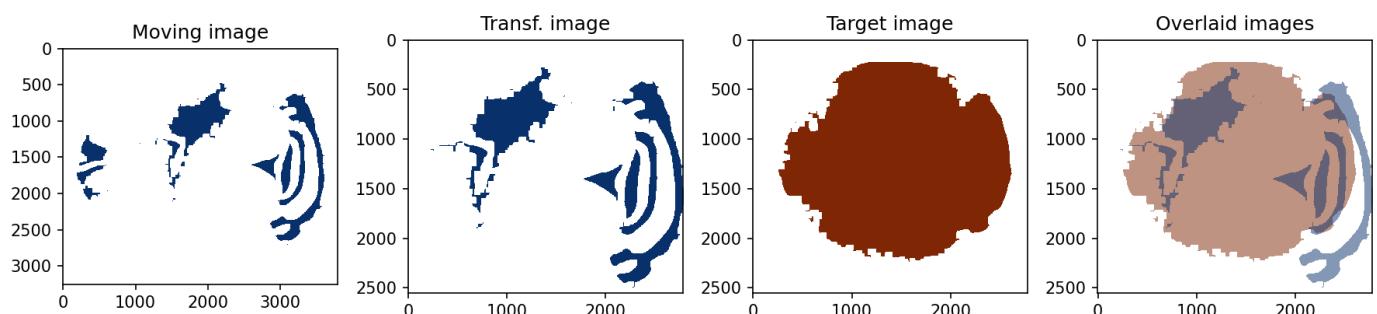


Figure 5.25: Results of registration of image P2A\_B6\_M2\_HE-0007-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0007-Scene-1 (Target image)

## 5 Histology image data

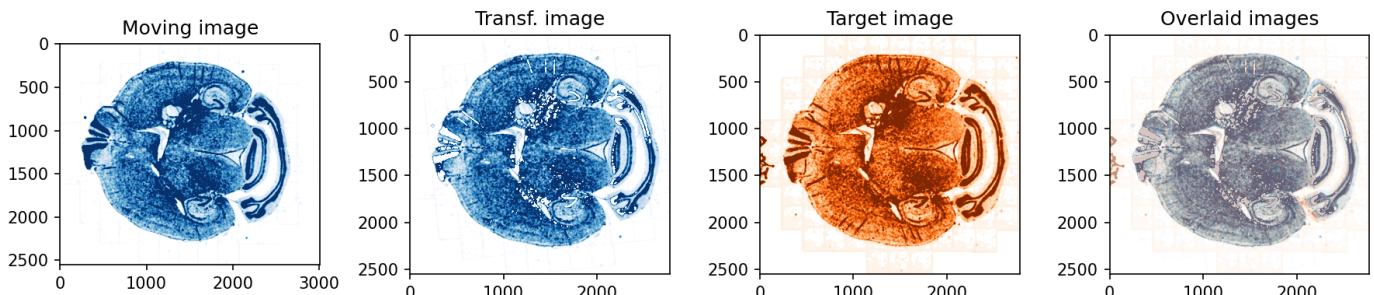


Figure 5.26: Results of registration of image P2A\_B6\_M2\_NOK-0007-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0007-Scene-1 (Target image)

### 5.1.14 0007\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0007-Scene-2.czi
- P2A\_B6\_M2\_HE-0007-Scene-2.czi
- P2A\_B6\_M2\_NOK-0007-Scene-2.czi

Registered stainings: 3/3

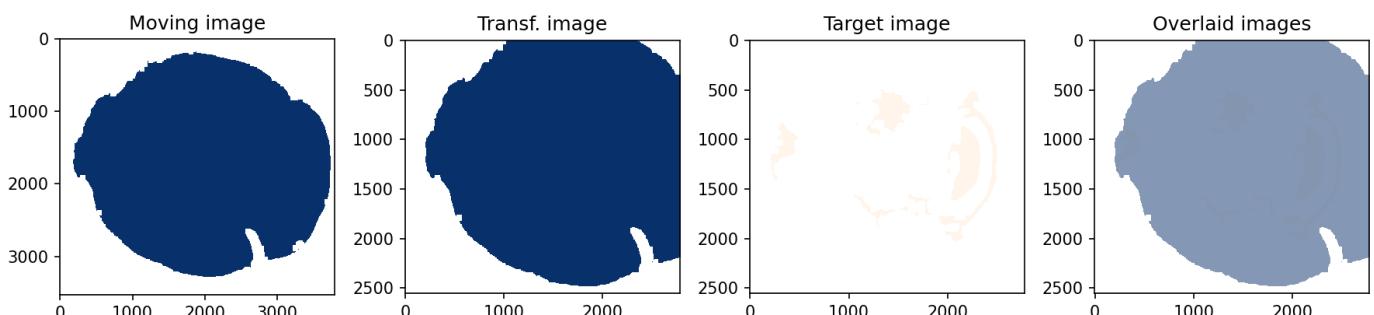


Figure 5.27: Results of registration of image P2A\_B6\_M2\_HE-0007-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0007-Scene-2 (Target image)

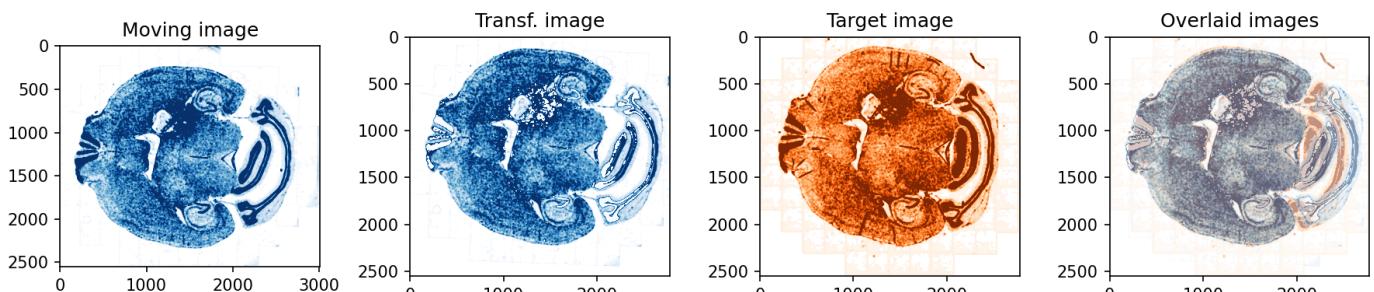


Figure 5.28: Results of registration of image P2A\_B6\_M2\_NOK-0007-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0007-Scene-2 (Target image)

### 5.1.15 0008\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0008-Scene-1.czi
- P2A\_B6\_M2\_HE-0008-Scene-1.czi
- P2A\_B6\_M2\_NOK-0008-Scene-1.czi

Registered stainings: 3/3

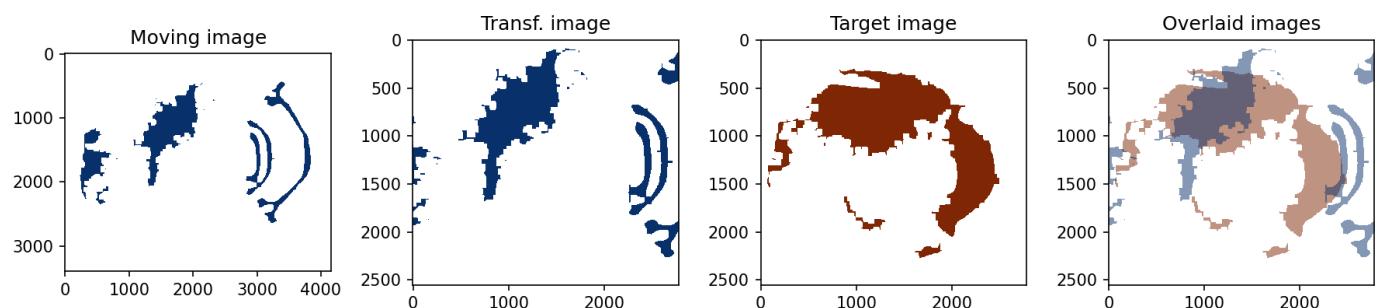


Figure 5.29: Results of registration of image P2A\_B6\_M2\_HE-0008-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0008-Scene-1 (Target image)

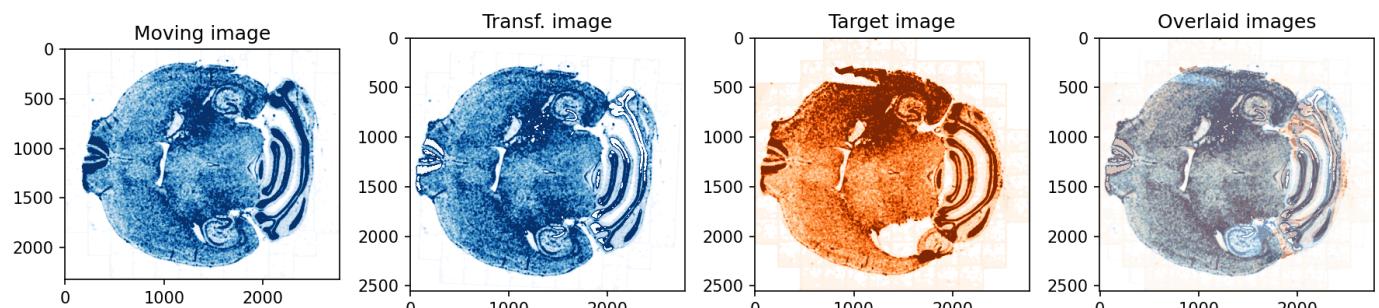


Figure 5.30: Results of registration of image P2A\_B6\_M2\_NOK-0008-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0008-Scene-1 (Target image)

### 5.1.16 0008\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0008-Scene-2.czi
- P2A\_B6\_M2\_HE-0008-Scene-2.czi
- P2A\_B6\_M2\_NOK-0008-Scene-2.czi

Registered stainings: 3/3

## 5 Histology image data

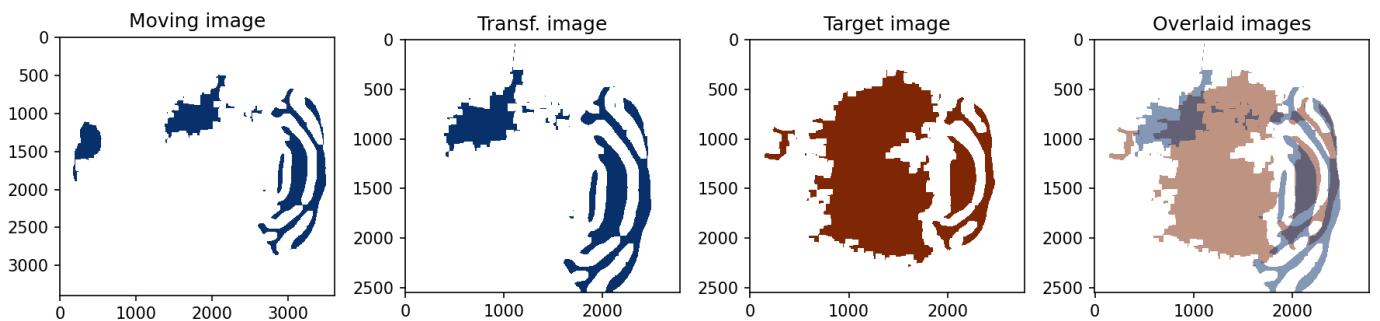


Figure 5.31: Results of registration of image P2A\_B6\_M2\_HE-0008-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0008-Scene-2 (Target image)

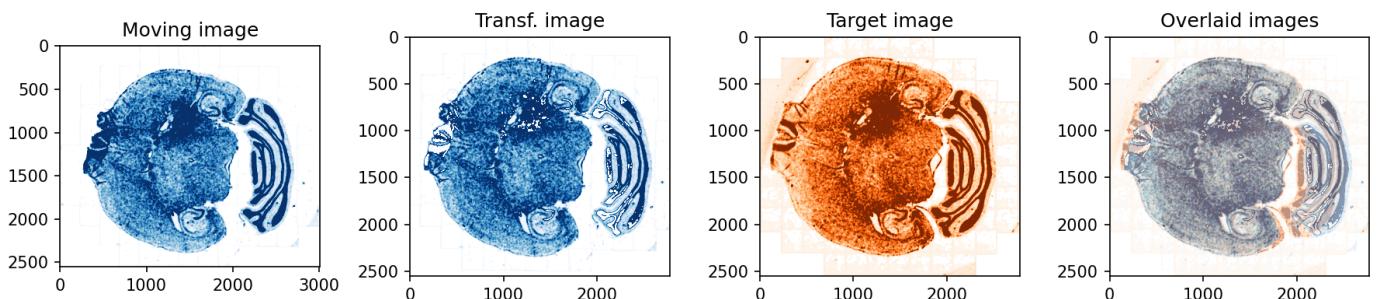


Figure 5.32: Results of registration of image P2A\_B6\_M2\_NOK-0008-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0008-Scene-2 (Target image)

### 5.1.17 0009\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0009-Scene-1.czi
- P2A\_B6\_M2\_NOK-0009-Scene-1.czi

Registered stainings: 2/3

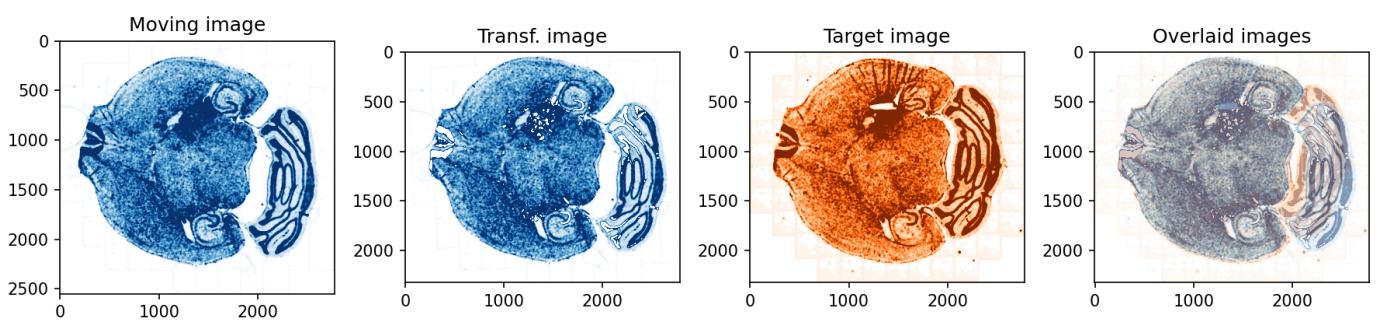


Figure 5.33: Results of registration of image P2A\_B6\_M2\_NOK-0009-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0009-Scene-1 (Target image)

### 5.1.18 0009\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0009-Scene-2.czi
- P2A\_B6\_M2\_NOK-0009-Scene-2.czi

Registered stainings: 2/3

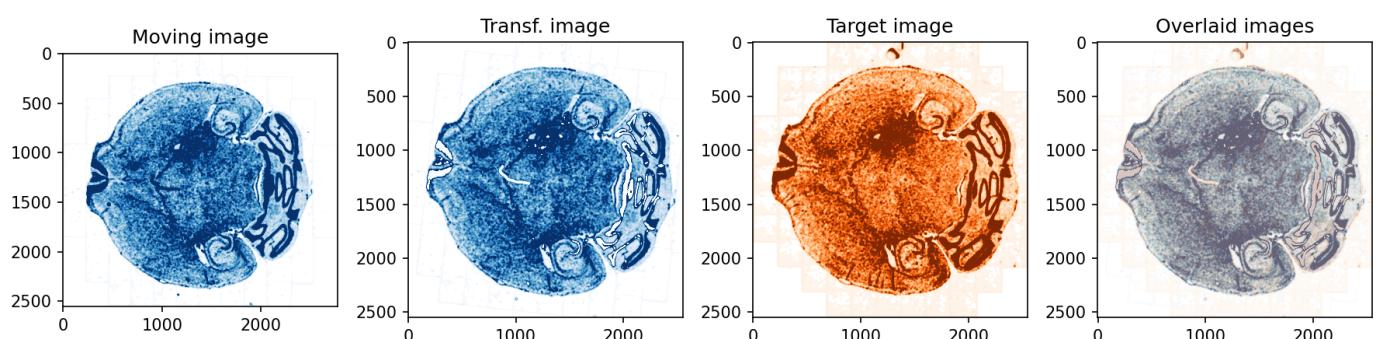


Figure 5.34: Results of registration of image P2A\_B6\_M2\_NOK-0009-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0009-Scene-2 (Target image)

### 5.1.19 0010\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0010-Scene-1.czi
- P2A\_B6\_M2\_HE-0010-Scene-1.czi
- P2A\_B6\_M2\_NOK-0010-Scene-1.czi

Registered stainings: 3/3

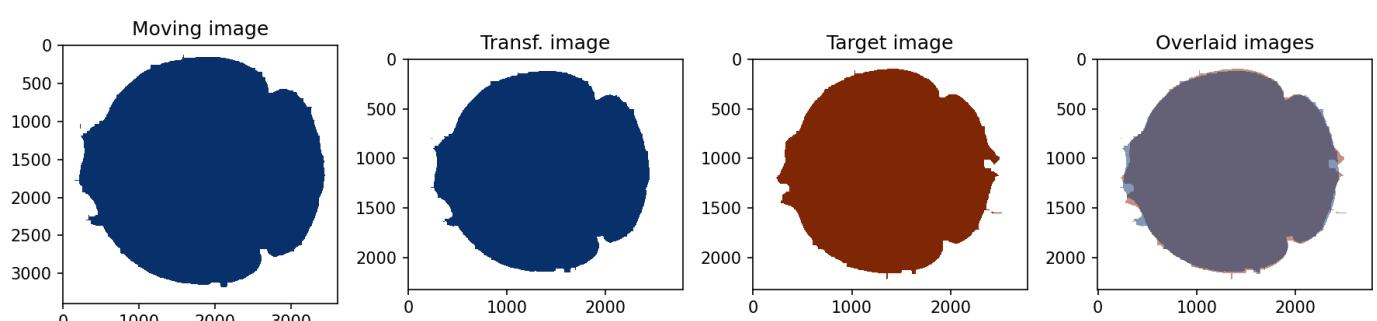


Figure 5.35: Results of registration of image P2A\_B6\_M2\_HE-0010-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0010-Scene-1 (Target image)

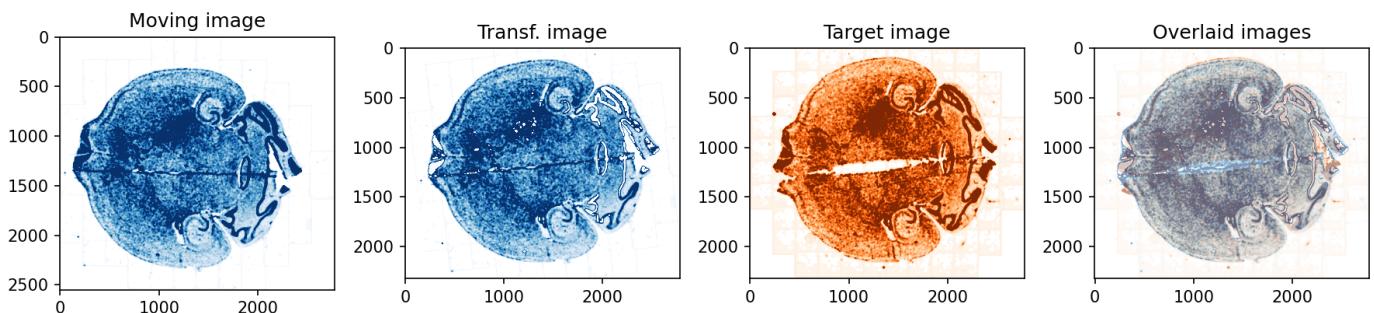


Figure 5.36: Results of registration of image P2A\_B6\_M2\_NOK-0010-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0010-Scene-1 (Target image)

### 5.1.20 0011\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0011-Scene-1.czi
- P2A\_B6\_M2\_HE-0011-Scene-1.czi
- P2A\_B6\_M2\_NOK-0011-Scene-1.czi

Registered stainings: 3/3

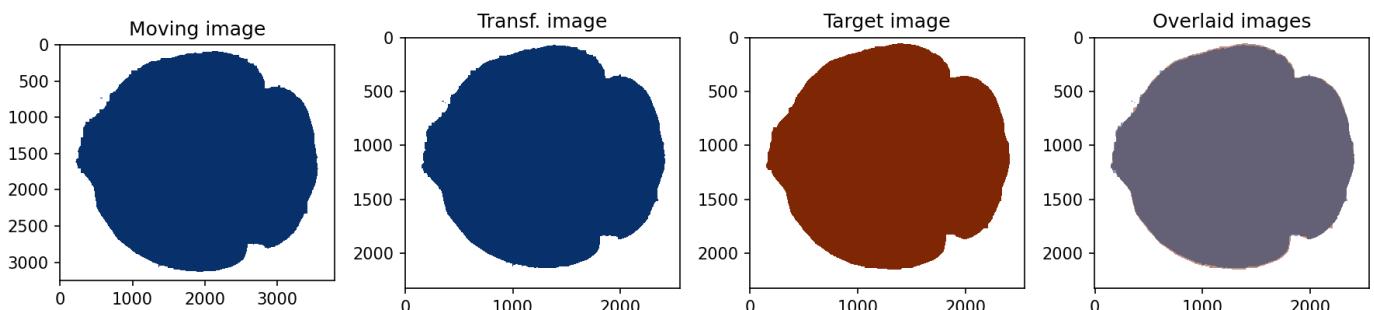


Figure 5.37: Results of registration of image P2A\_B6\_M2\_HE-0011-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0011-Scene-1 (Target image)

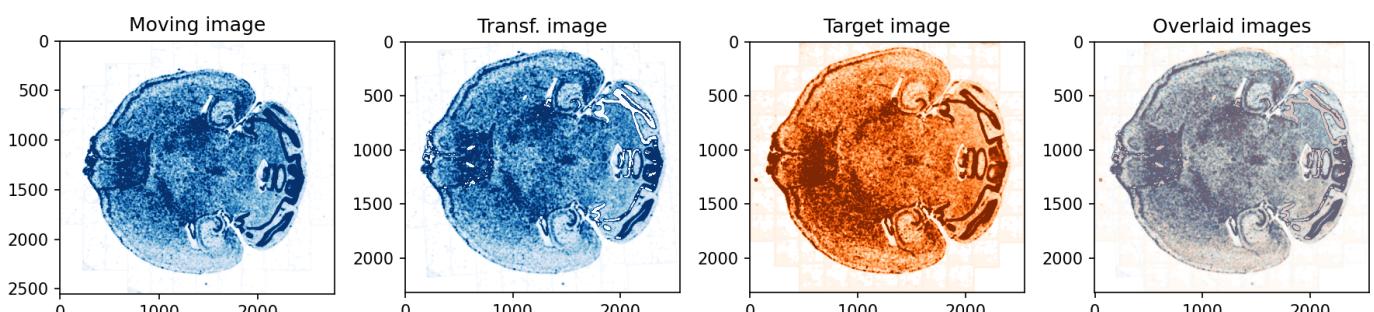


Figure 5.38: Results of registration of image P2A\_B6\_M2\_NOK-0011-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0011-Scene-1 (Target image)

### 5.1.21 0011\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0011-Scene-2.czi
- P2A\_B6\_M2\_HE-0011-Scene-2.czi
- P2A\_B6\_M2\_NOK-0011-Scene-2.czi

Registered stainings: 3/3

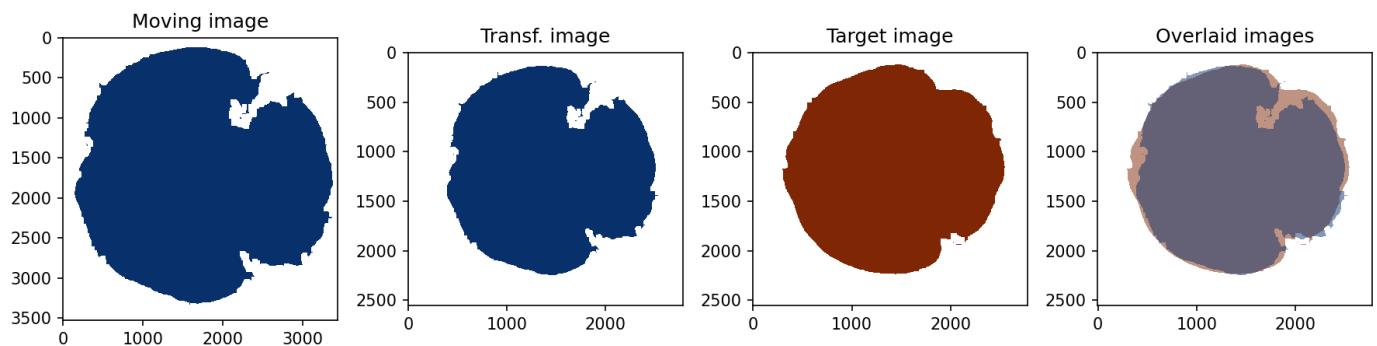


Figure 5.39: Results of registration of image P2A\_B6\_M2\_HE-0011-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0011-Scene-2 (Target image)

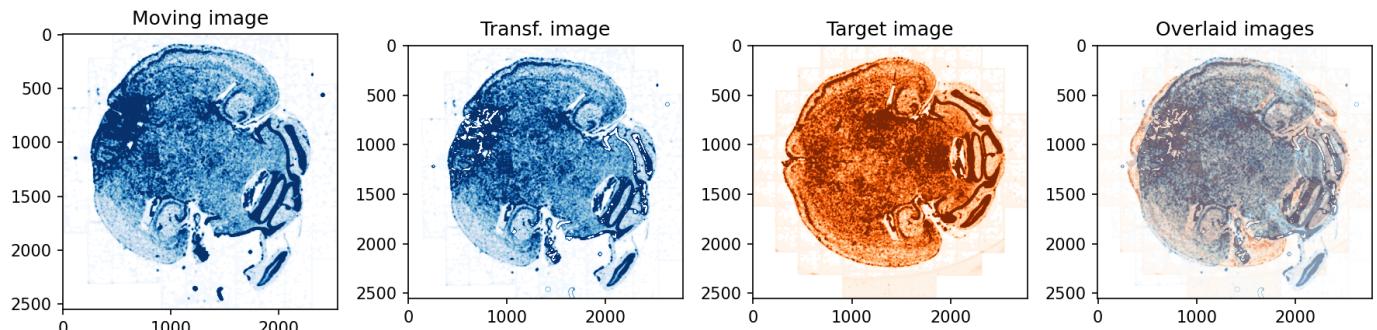


Figure 5.40: Results of registration of image P2A\_B6\_M2\_NOK-0011-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0011-Scene-2 (Target image)

### 5.1.22 0012\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0012-Scene-1.czi
- P2A\_B6\_M2\_HE-0012-Scene-1.czi
- P2A\_B6\_M2\_NOK-0012-Scene-1.czi

Registered stainings: 3/3

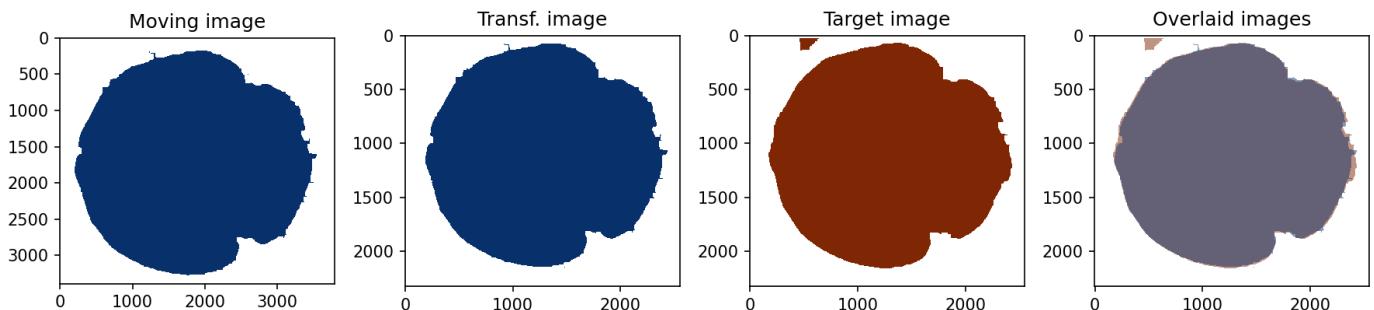


Figure 5.41: Results of registration of image P2A\_B6\_M2\_HE-0012-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0012-Scene-1 (Target image)

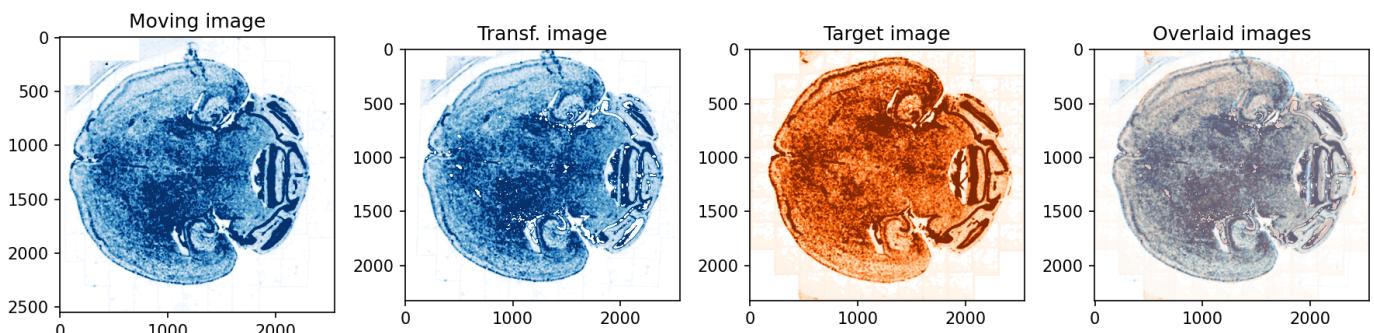


Figure 5.42: Results of registration of image P2A\_B6\_M2\_NOK-0012-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0012-Scene-1 (Target image)

### 5.1.23 0012\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0012-Scene-2.czi
- P2A\_B6\_M2\_HE-0012-Scene-2.czi
- P2A\_B6\_M2\_NOK-0012-Scene-2.czi

Registered stainings: 3/3

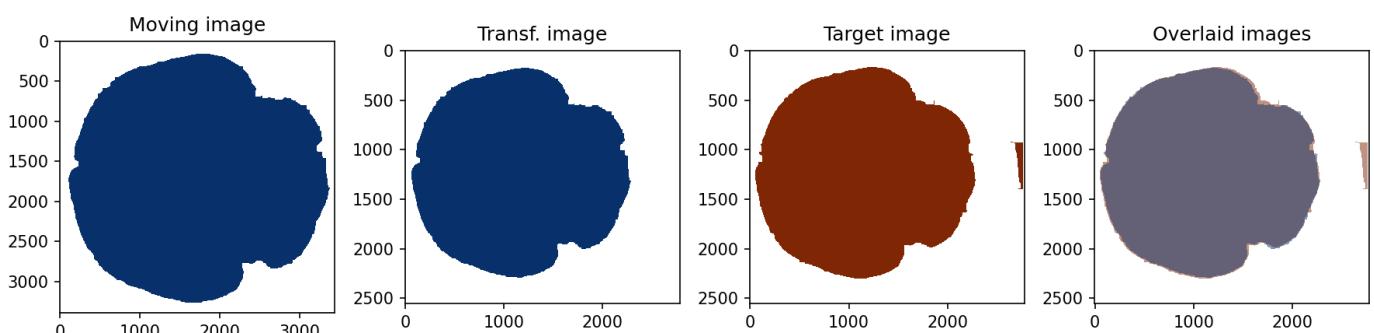


Figure 5.43: Results of registration of image P2A\_B6\_M2\_HE-0012-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0012-Scene-2 (Target image)

## 5 Histology image data

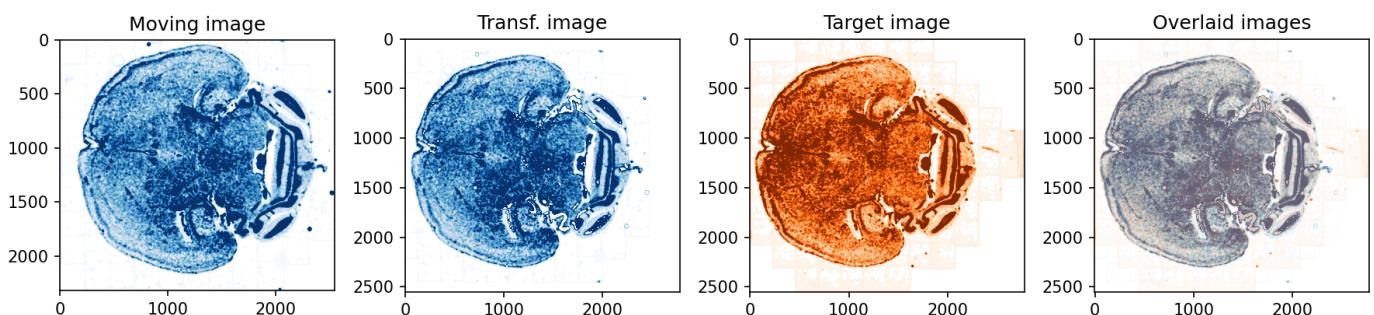


Figure 5.44: Results of registration of image P2A\_B6\_M2\_NOK-0012-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0012-Scene-2 (Target image)

### 5.1.24 0013\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0013-Scene-1.czi
- P2A\_B6\_M2\_HE-0013-Scene-1.czi
- P2A\_B6\_M2\_NOK-0013-Scene-1.czi

Registered stainings: 3/3

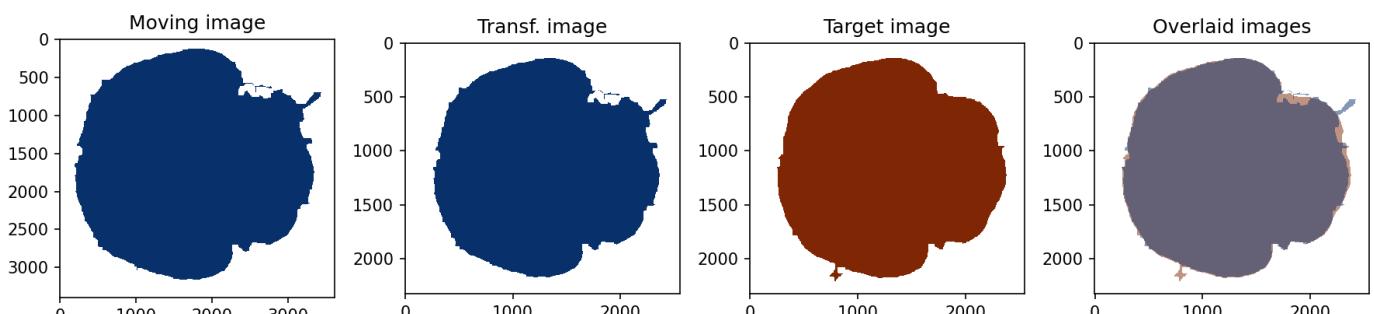


Figure 5.45: Results of registration of image P2A\_B6\_M2\_HE-0013-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0013-Scene-1 (Target image)

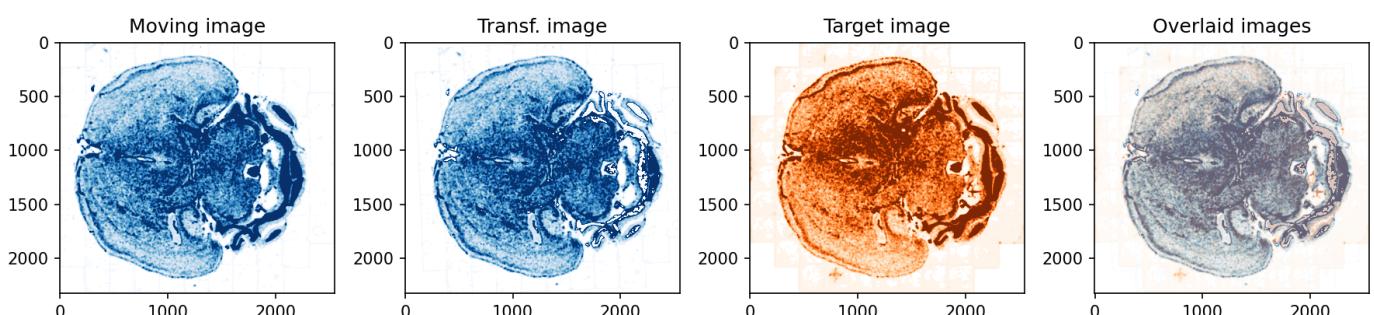


Figure 5.46: Results of registration of image P2A\_B6\_M2\_NOK-0013-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0013-Scene-1 (Target image)

### 5.1.25 0013\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0013-Scene-2.czi
- P2A\_B6\_M2\_HE-0013-Scene-2.czi
- P2A\_B6\_M2\_NOK-0013-Scene-2.czi

Registered stainings: 3/3

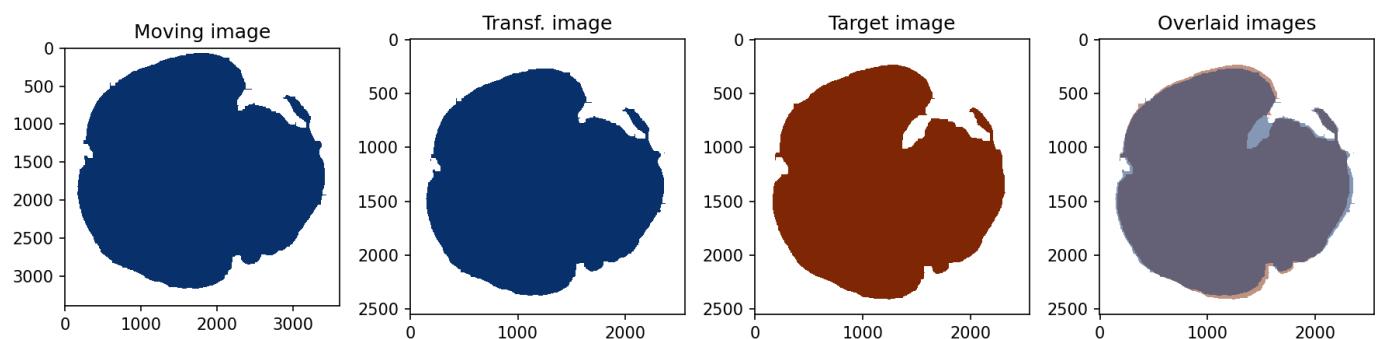


Figure 5.47: Results of registration of image P2A\_B6\_M2\_HE-0013-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0013-Scene-2 (Target image)

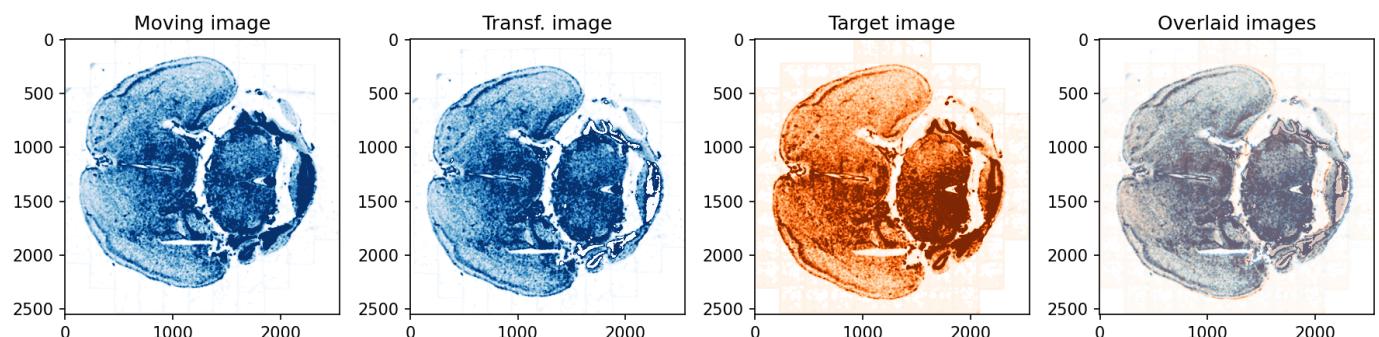


Figure 5.48: Results of registration of image P2A\_B6\_M2\_NOK-0013-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0013-Scene-2 (Target image)

### 5.1.26 0014\_Scene\_1

Raw images:

- P2A\_B6\_M2\_GNI-0014-Scene-1.czi
- P2A\_B6\_M2\_HE-0014-Scene-1.czi
- P2A\_B6\_M2\_NOK-0014-Scene-1.czi

Registered stainings: 3/3

## 5 Histology image data

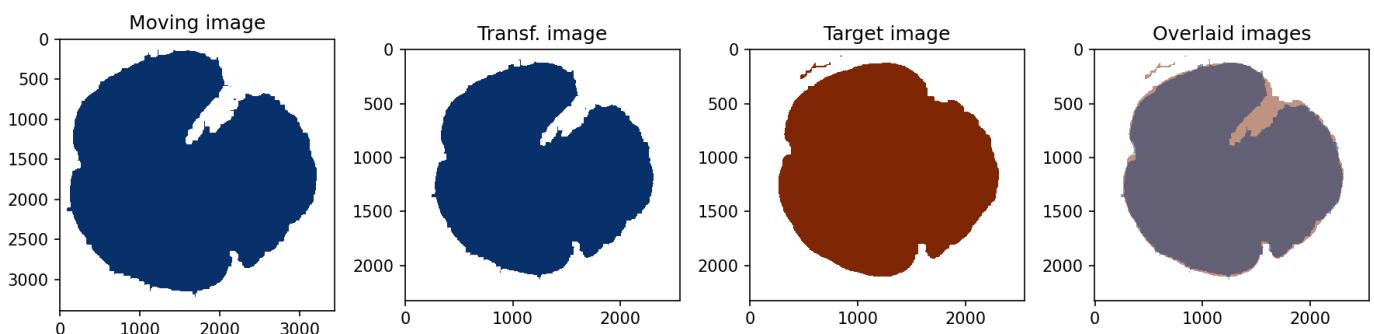


Figure 5.49: Results of registration of image P2A\_B6\_M2\_HE-0014-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0014-Scene-1 (Target image)

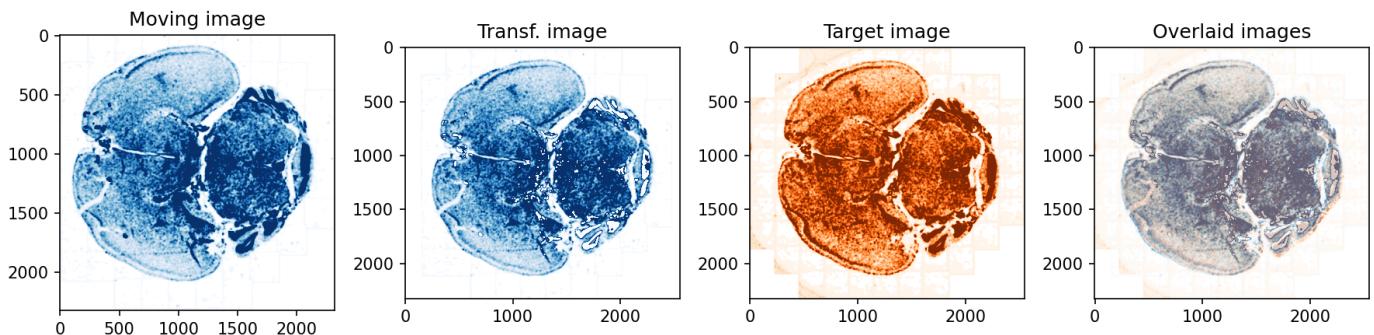


Figure 5.50: Results of registration of image P2A\_B6\_M2\_NOK-0014-Scene-1 (Moving image) to P2A\_B6\_M2\_GNI-0014-Scene-1 (Target image)

### 5.1.27 0014\_Scene\_2

Raw images:

- P2A\_B6\_M2\_GNI-0014-Scene-2.czi
- P2A\_B6\_M2\_HE-0014-Scene-2.czi
- P2A\_B6\_M2\_NOK-0014-Scene-2.czi

Registered stainings: 3/3

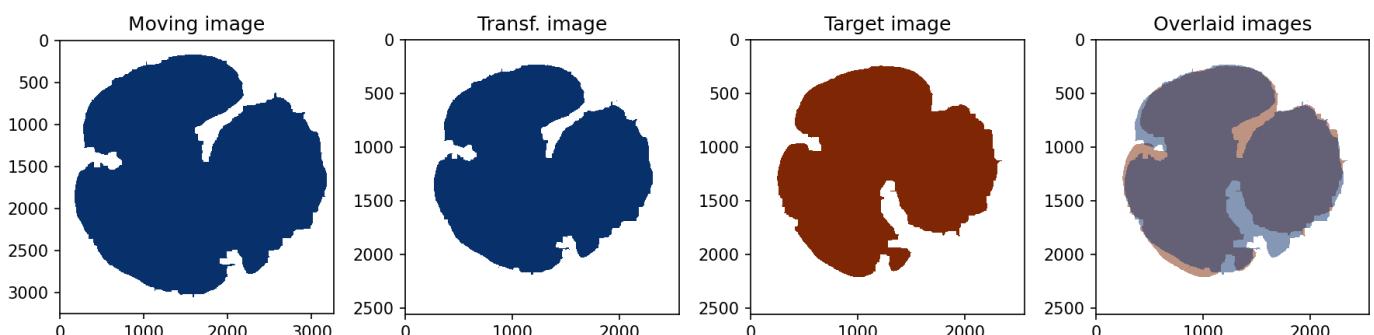


Figure 5.51: Results of registration of image P2A\_B6\_M2\_HE-0014-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0014-Scene-2 (Target image)

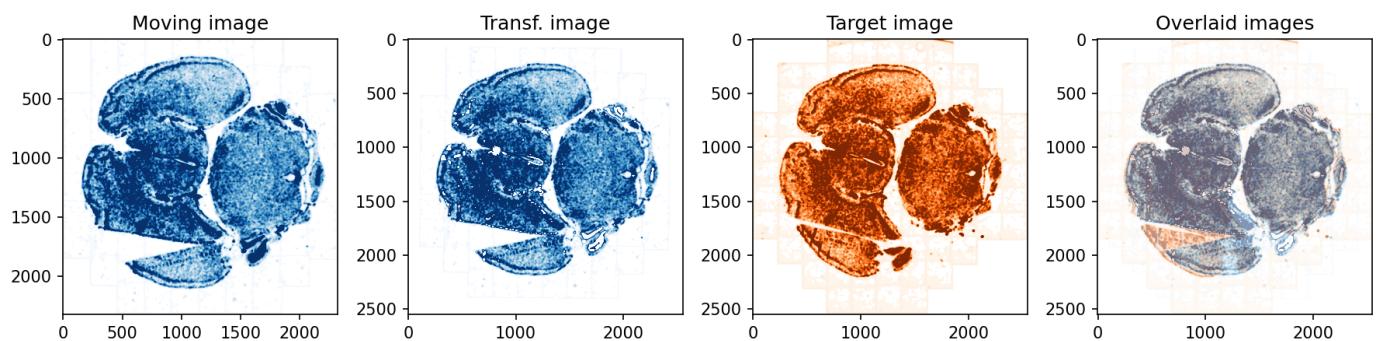


Figure 5.52: Results of registration of image P2A\_B6\_M2\_NOK-0014-Scene-2 (Moving image) to P2A\_B6\_M2\_GNI-0014-Scene-2 (Target image)

## 5.2 Slice2Volume

Forward transformation files: 27/27

Inverse transformation files: 27/27

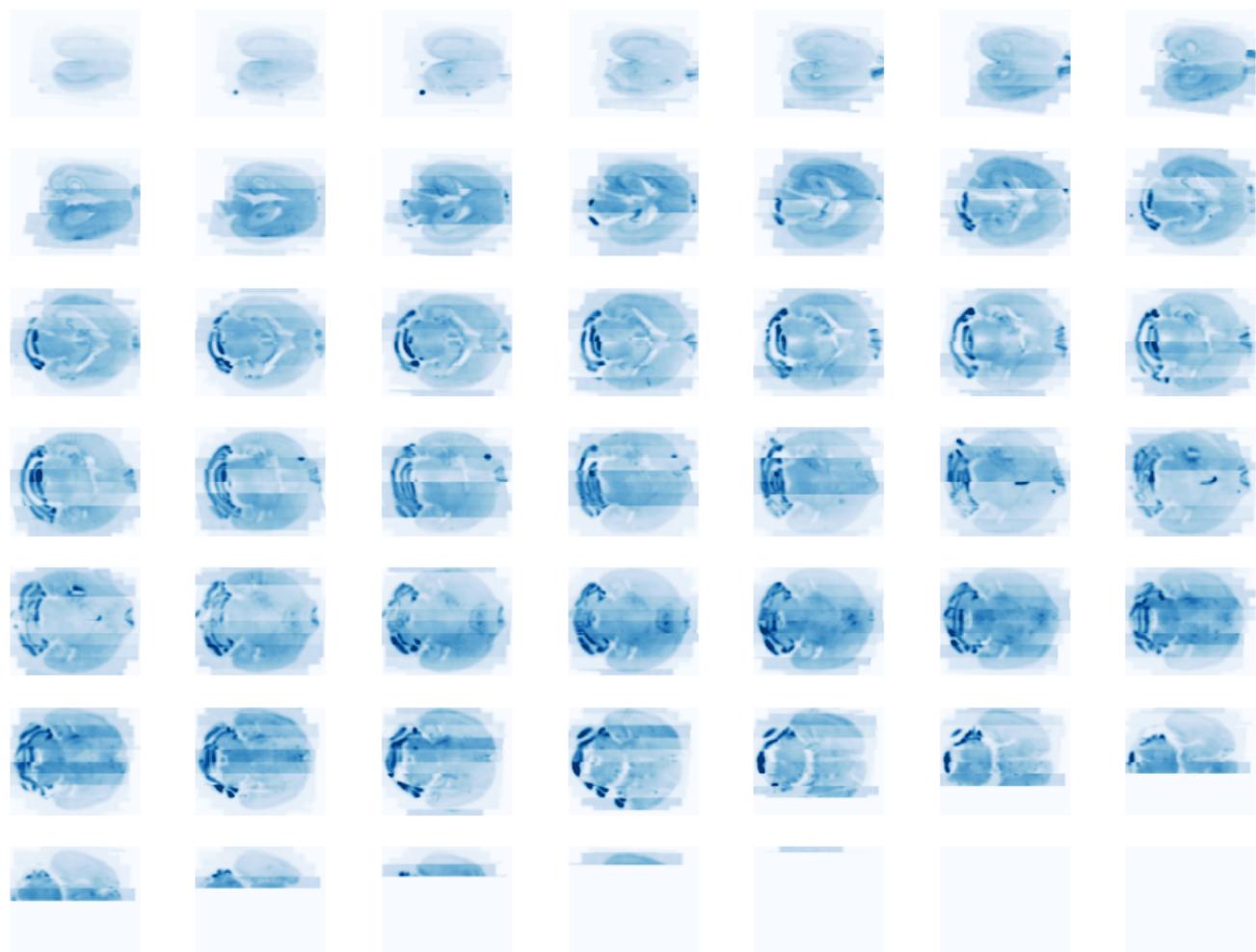


Figure 5.53: Sequence of coronal DAPI images that were transformed with Slice2Volume. This view allows to evaluate the consistency of subsequent slices.

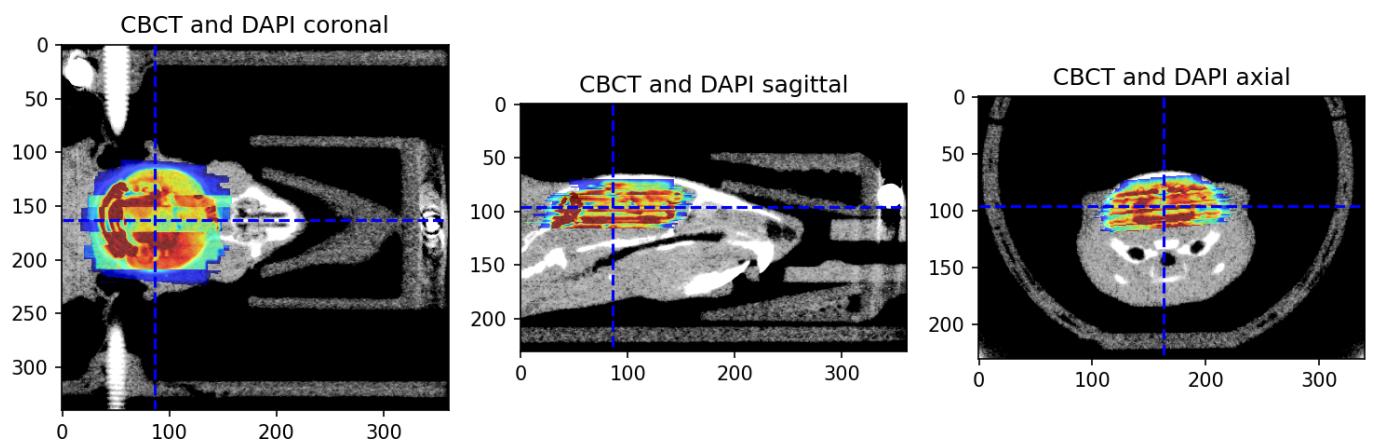


Figure 5.54: Overlay of downsampled and transformed histological image (DAPI\_r) and CBCT