

# QA protocol: P2A\_C3H\_M8

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# 1 CBCT image data

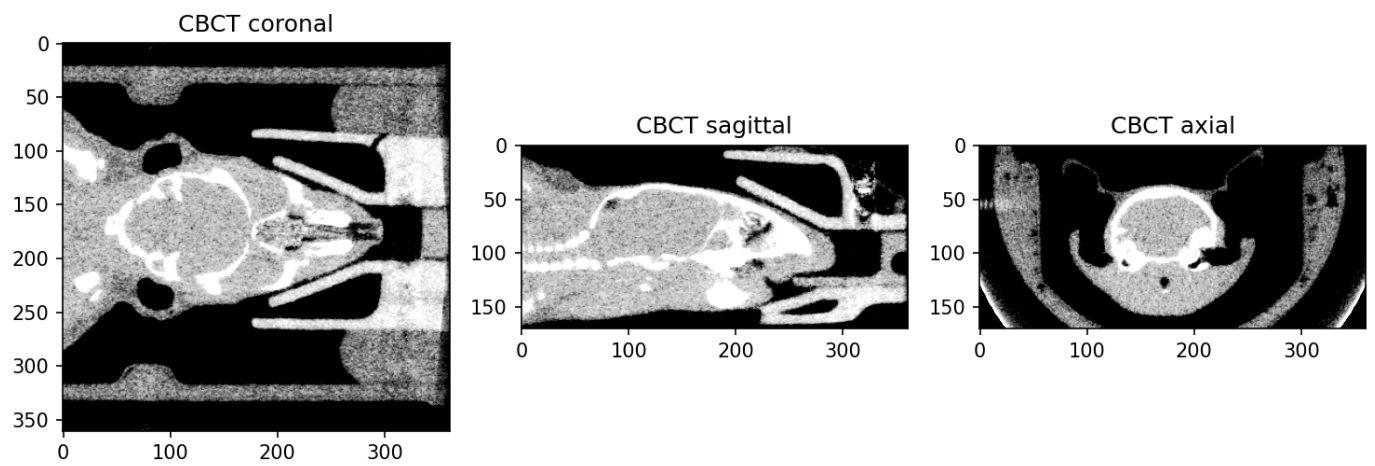


Figure 1.1: Multi-view cutplanes of CBCT serving as anatomical reference

# 2 Atlas image data

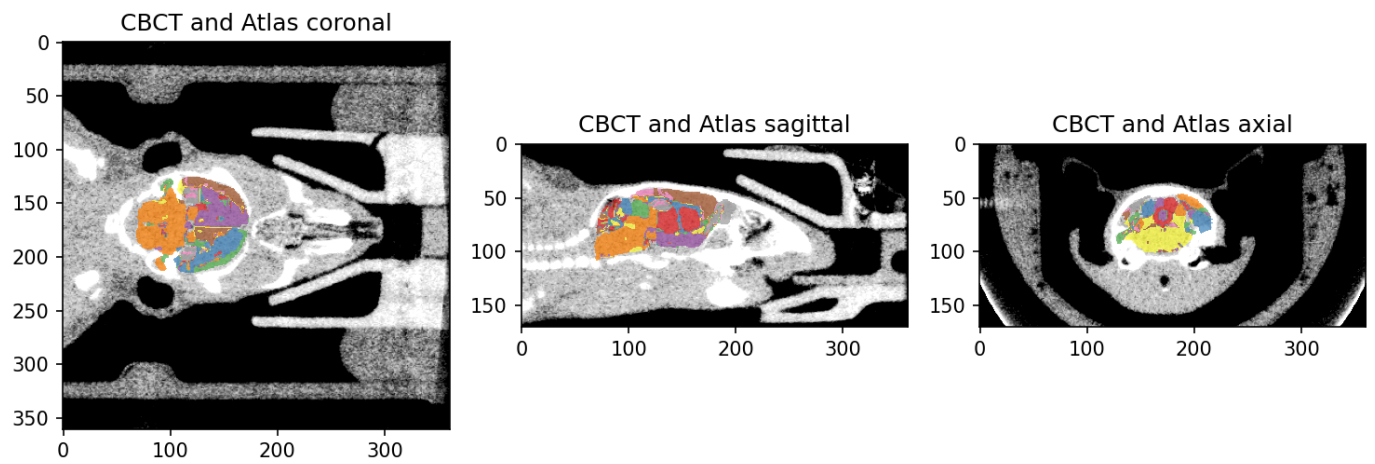


Figure 2.1: Overlay of CBCT and registered DSURQE brain atlas

### 3 MRI image data

#### 3.1 Denoising

##### 3.1.1 Sequence type: T1

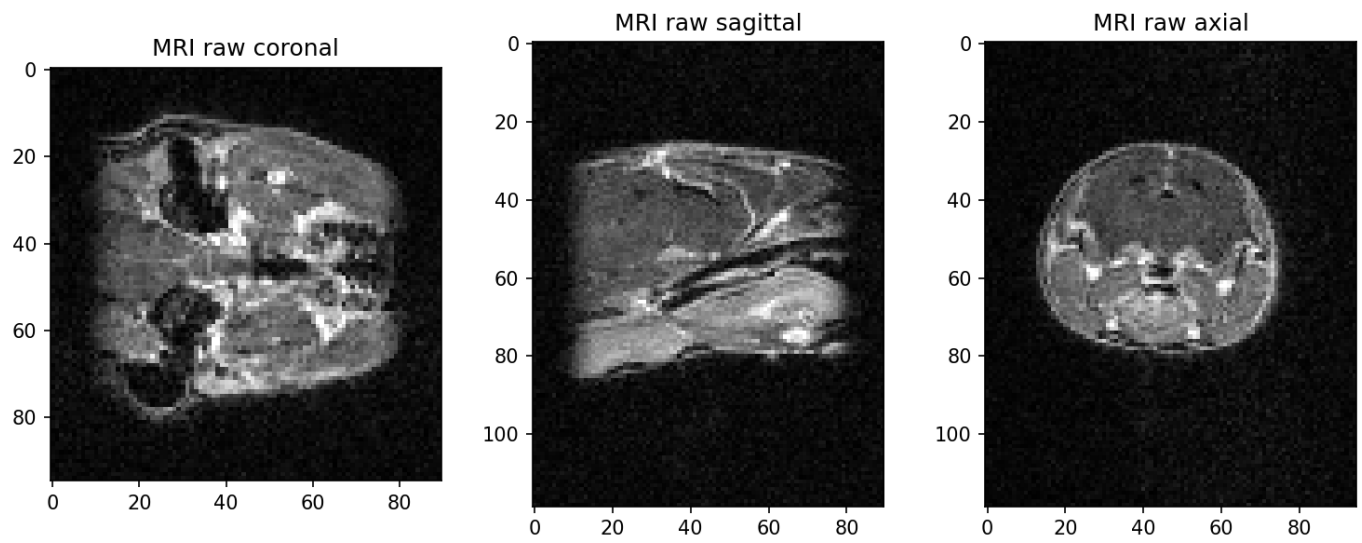


Figure 3.1: Raw MRI image, Timepoint:Week\_00, Sequence type: T1

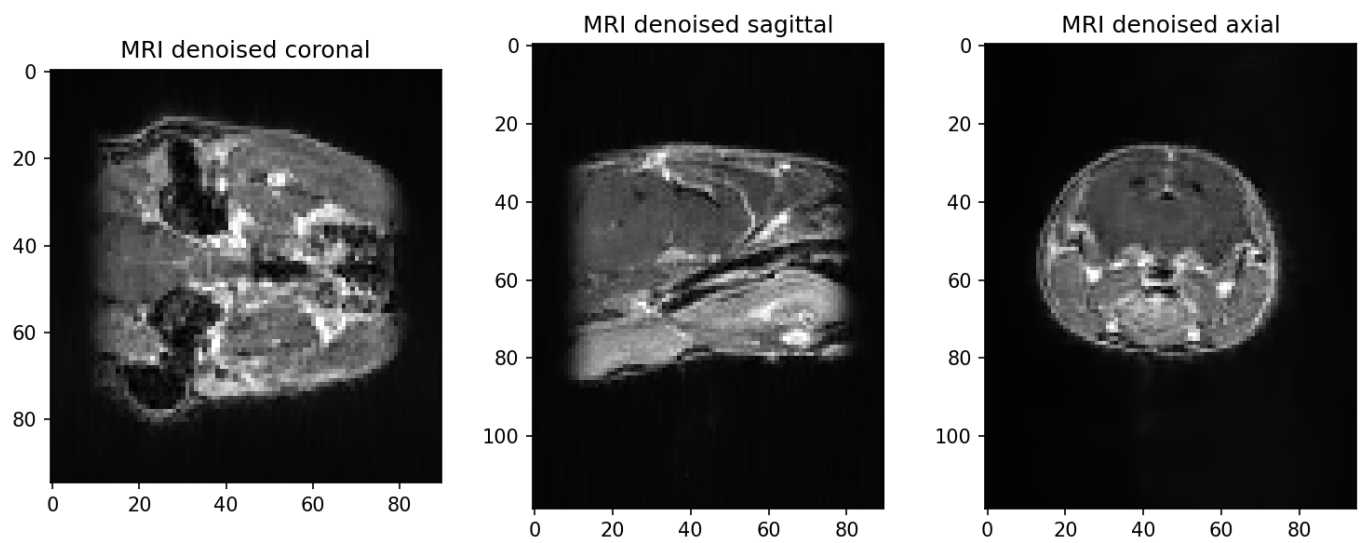


Figure 3.2: Denoised MRI image, Timepoint:Week\_00, Sequence type: T1

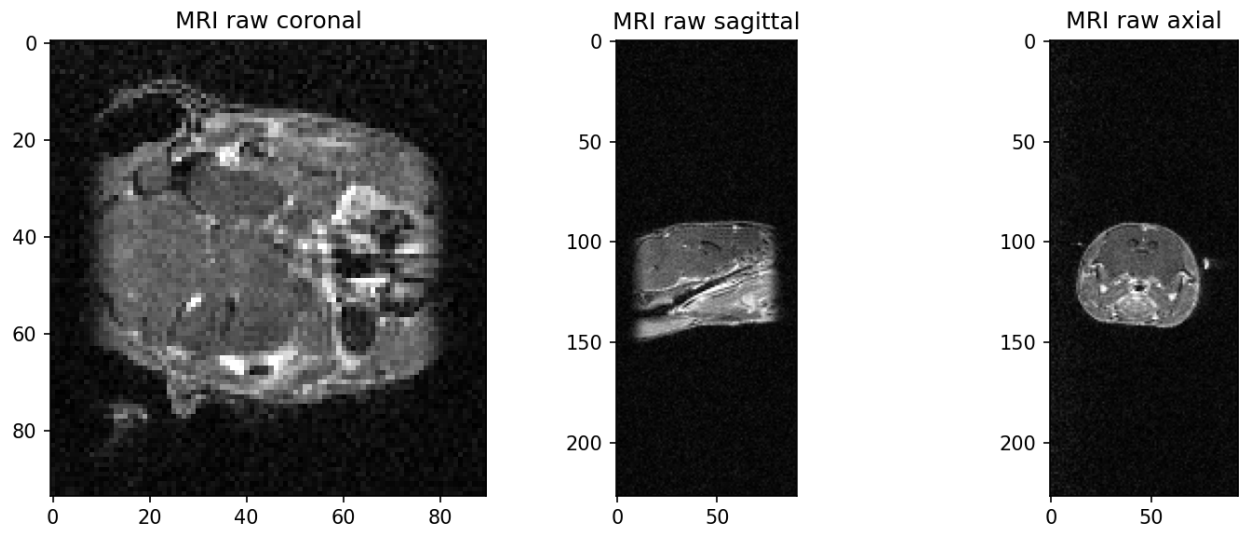


Figure 3.3: Raw MRI image, Timepoint:Week.03, Sequence type: T1

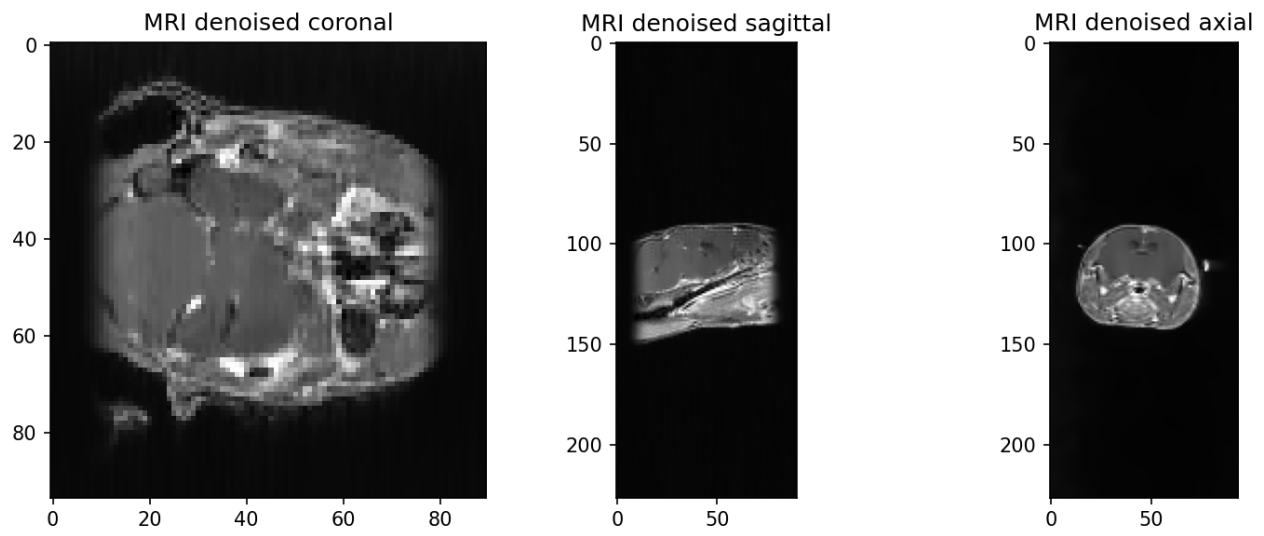


Figure 3.4: Denoised MRI image, Timepoint:Week.03, Sequence type: T1

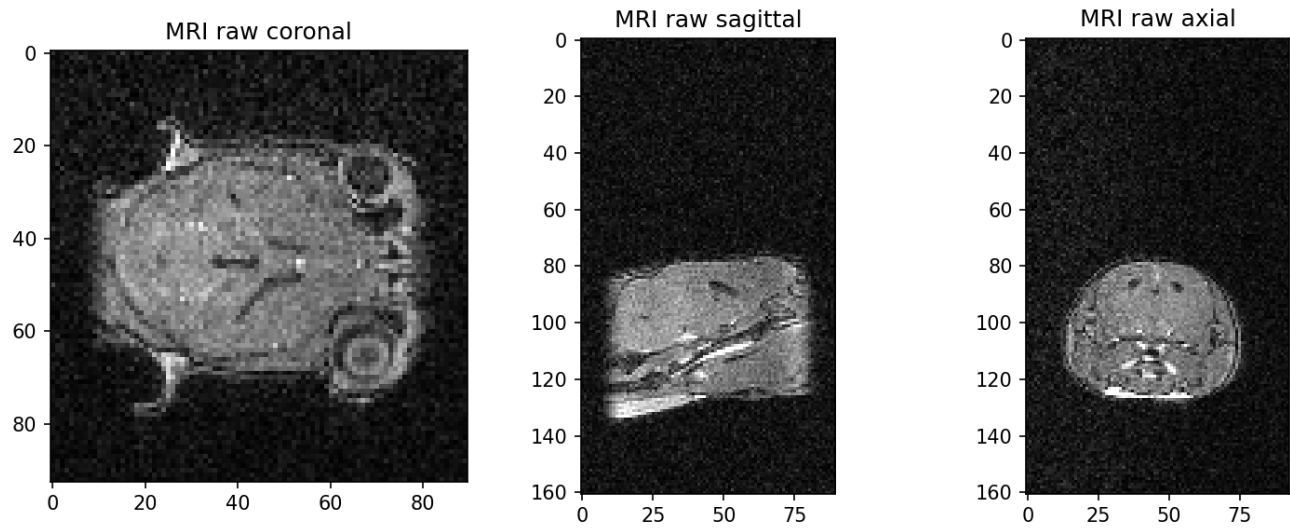


Figure 3.5: Raw MRI image, Timepoint:Week.07, Sequence type: T1

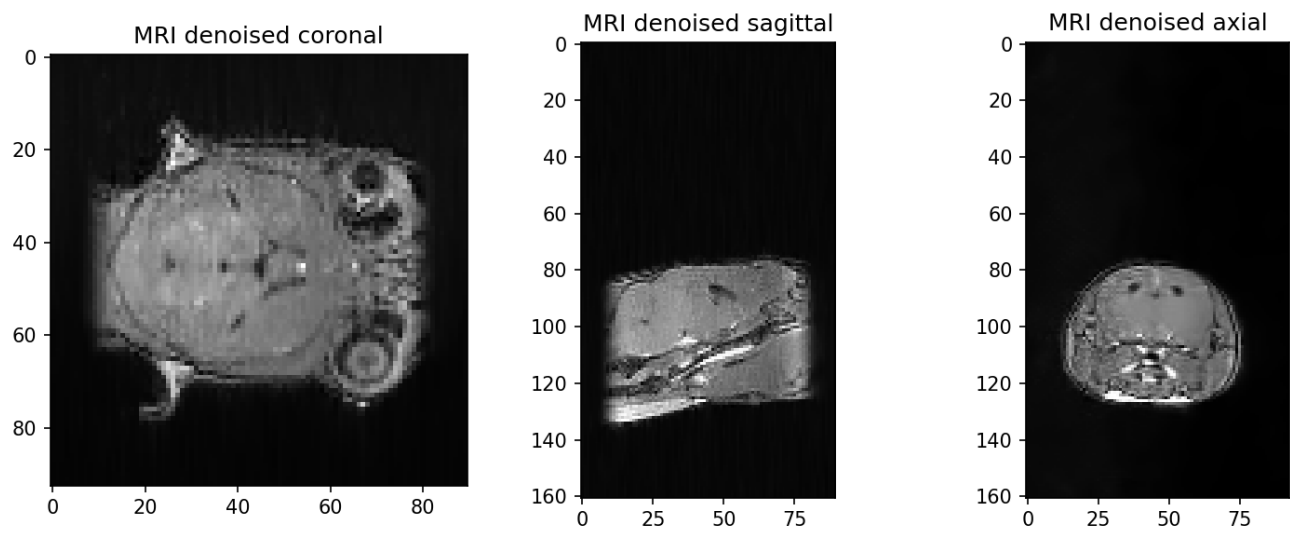


Figure 3.6: Denoised MRI image, Timepoint:Week.07, Sequence type: T1

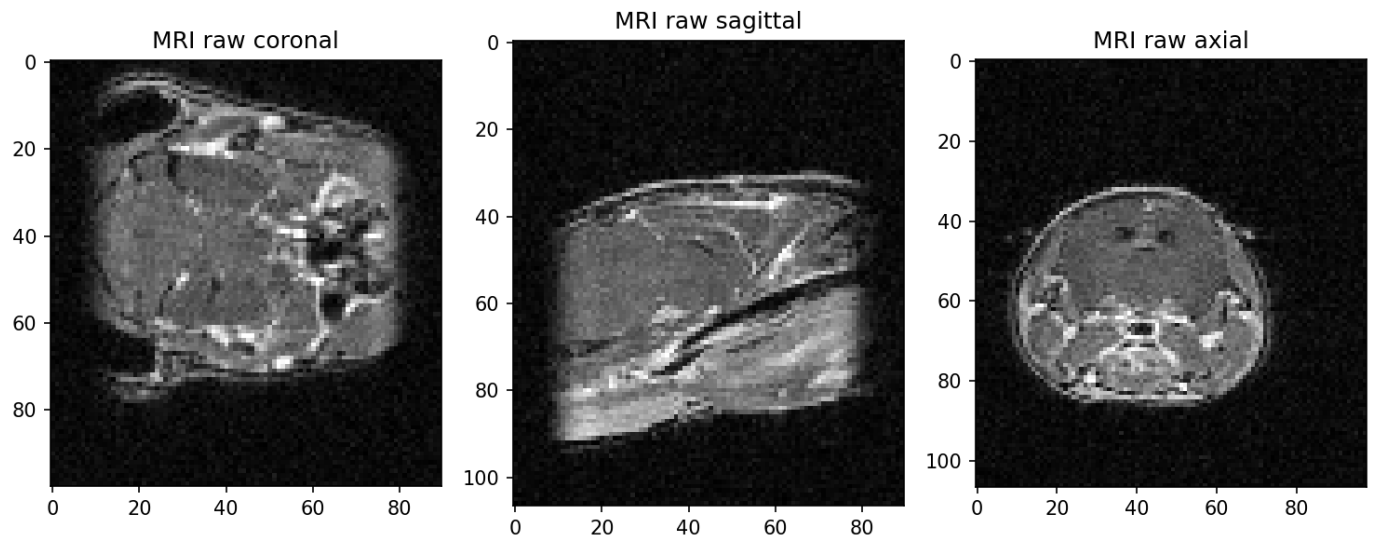


Figure 3.7: Raw MRI image, Timepoint:Week\_13, Sequence type: T1

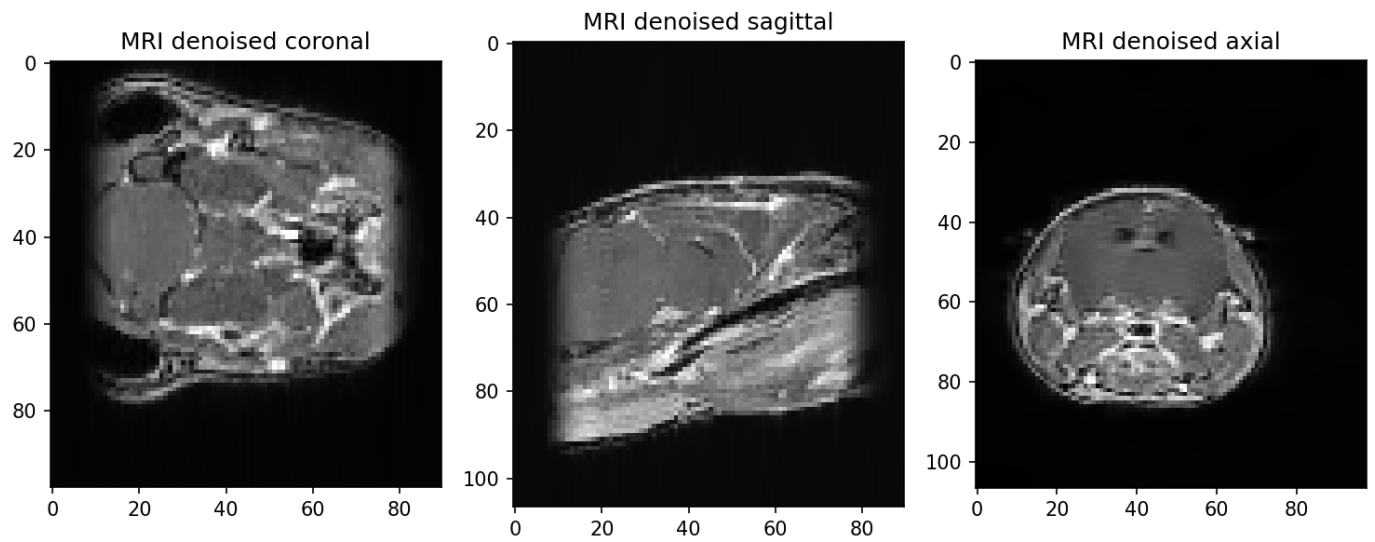


Figure 3.8: Denoised MRI image, Timepoint:Week\_13, Sequence type: T1

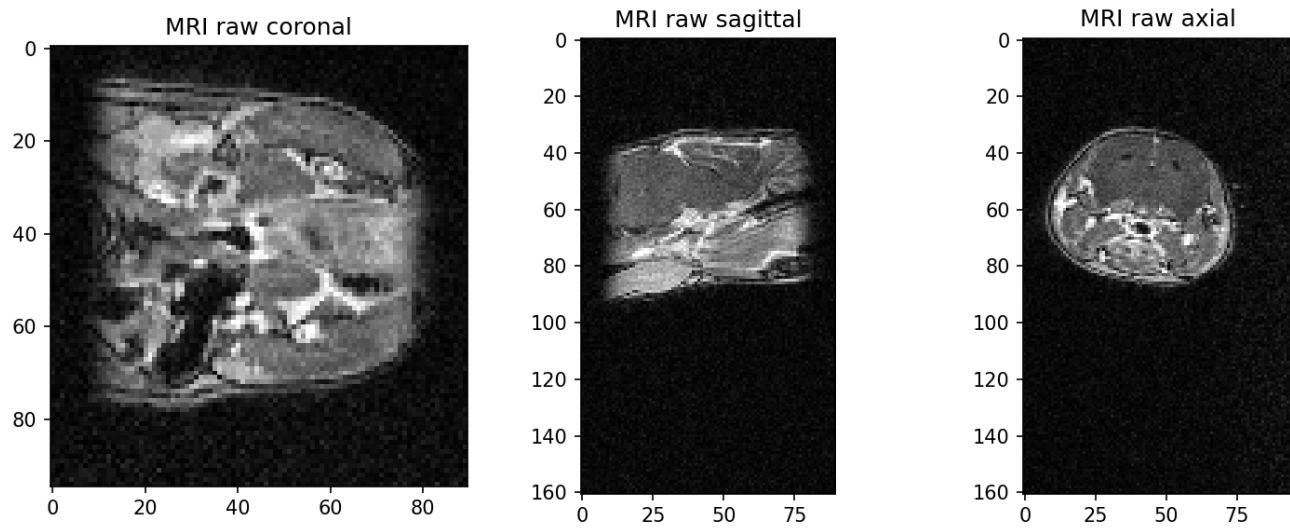


Figure 3.9: Raw MRI image, Timepoint:Week\_19, Sequence type: T1

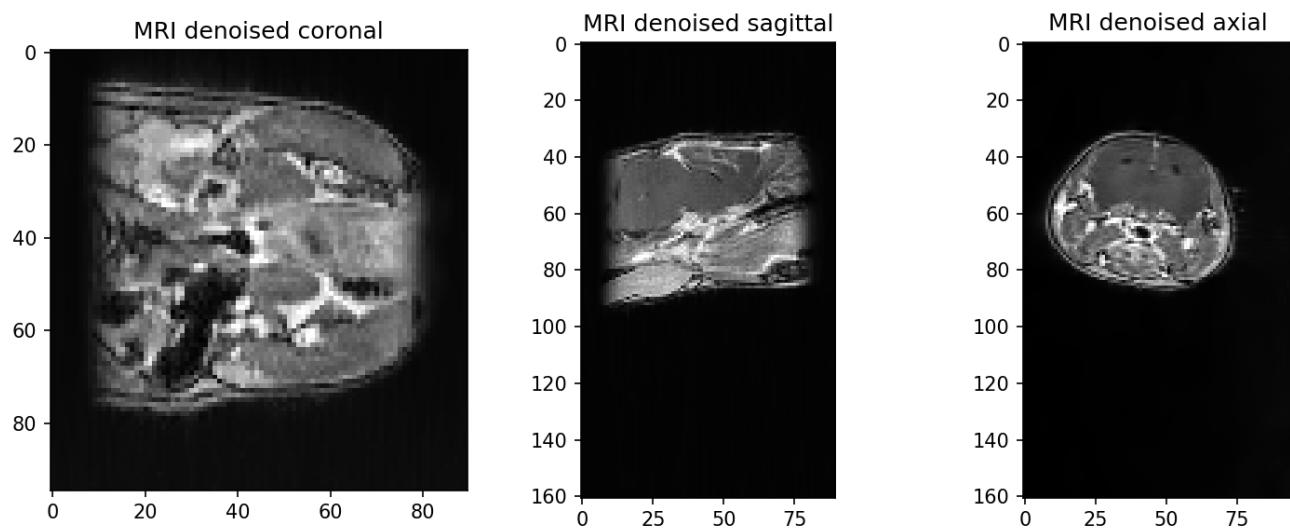


Figure 3.10: Denoised MRI image, Timepoint:Week\_19, Sequence type: T1

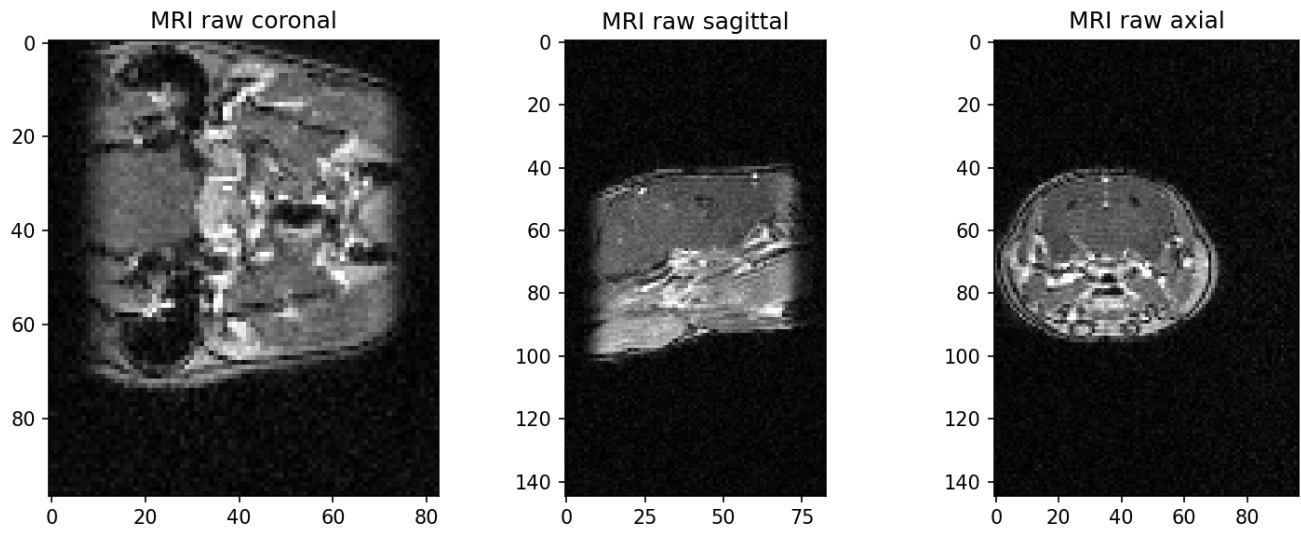


Figure 3.11: Raw MRI image, Timepoint:Week\_25, Sequence type: T1

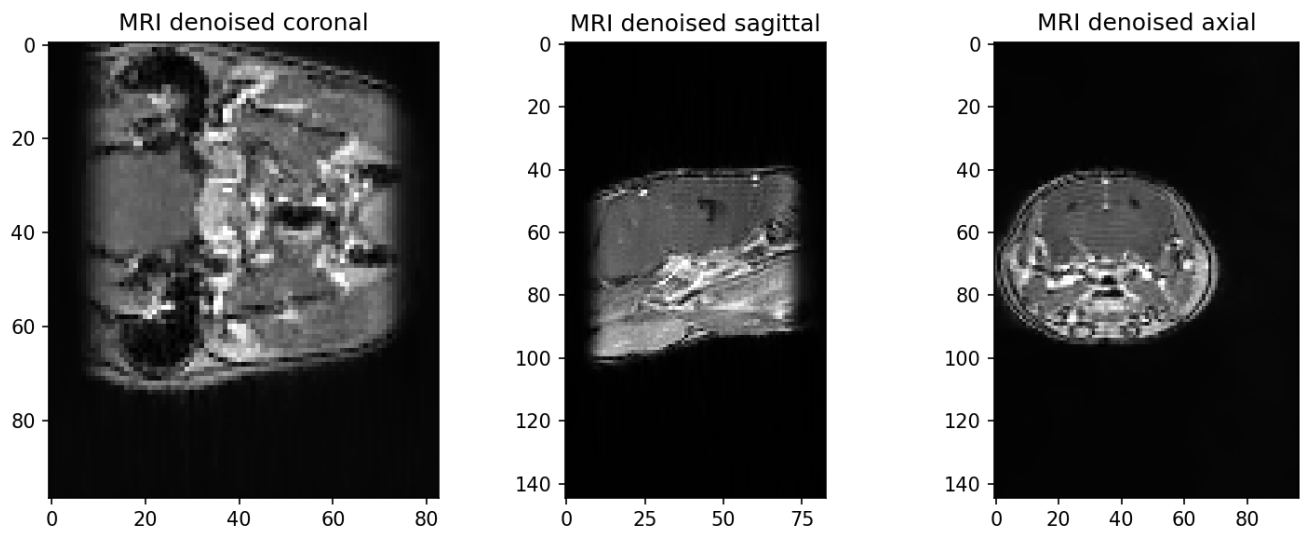


Figure 3.12: Denoised MRI image, Timepoint:Week\_25, Sequence type: T1

### 3.1.2 Sequence type: T2

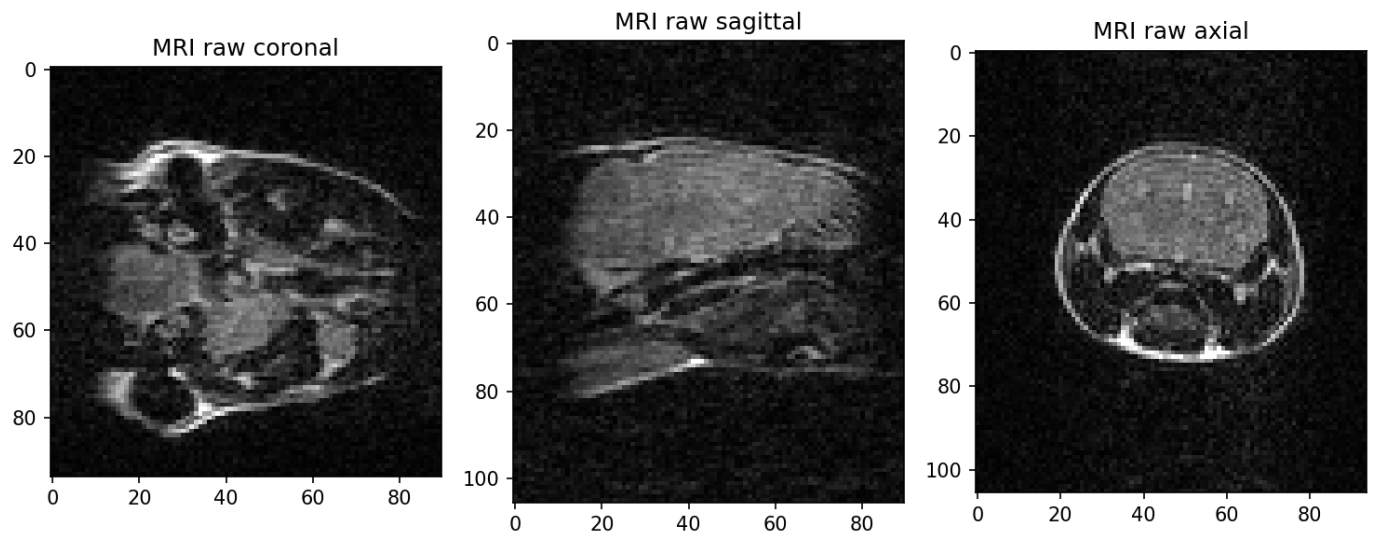


Figure 3.13: Raw MRI image, Timepoint:Week\_00, Sequence type: T2

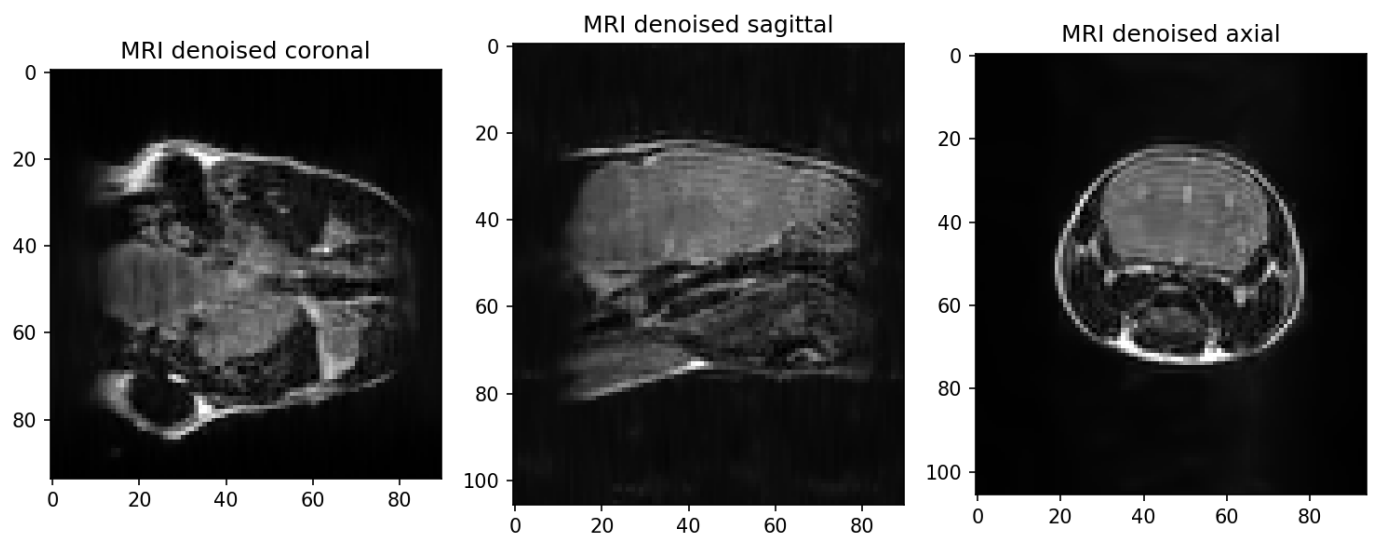


Figure 3.14: Denoised MRI image, Timepoint:Week\_00, Sequence type: T2

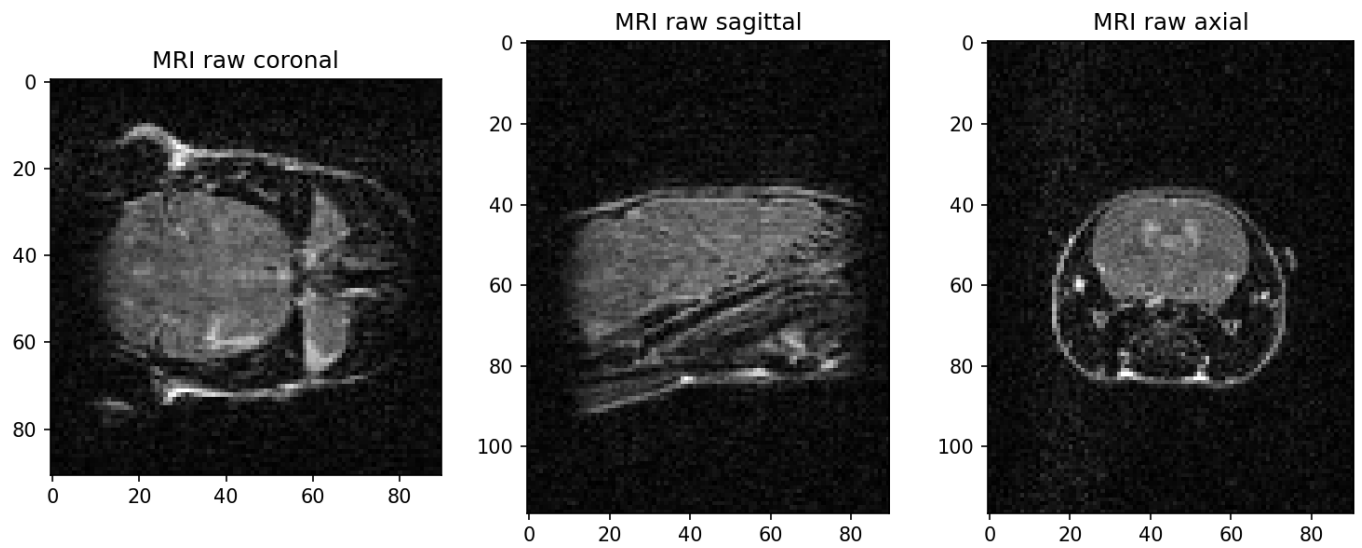


Figure 3.15: Raw MRI image, Timepoint:Week\_03, Sequence type: T2

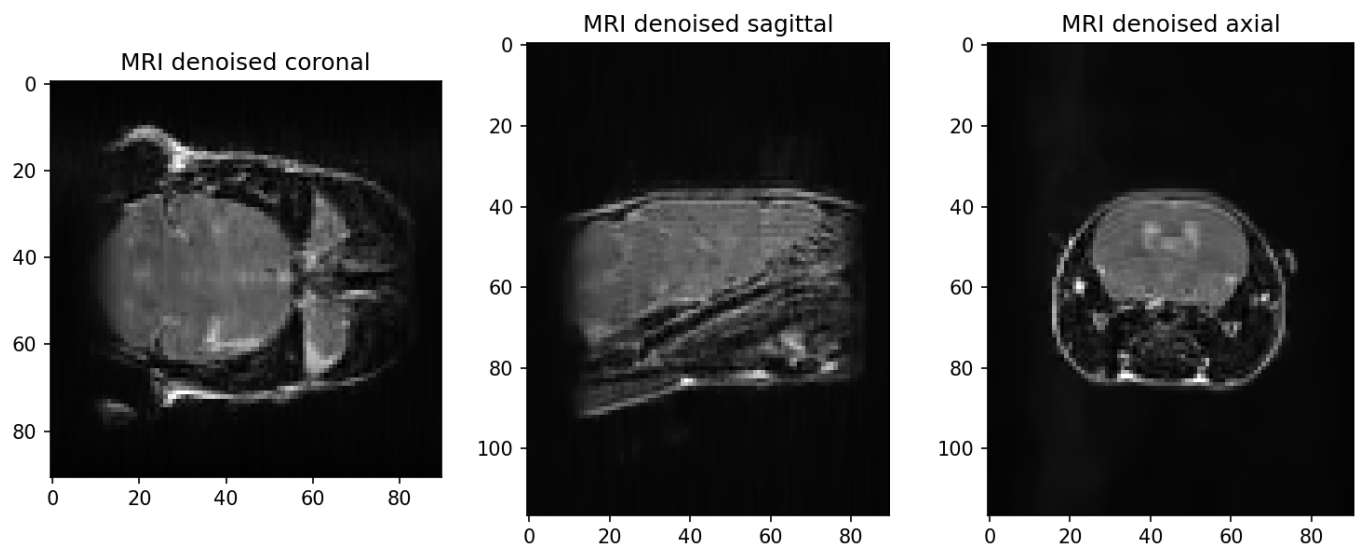


Figure 3.16: Denoised MRI image, Timepoint:Week\_03, Sequence type: T2

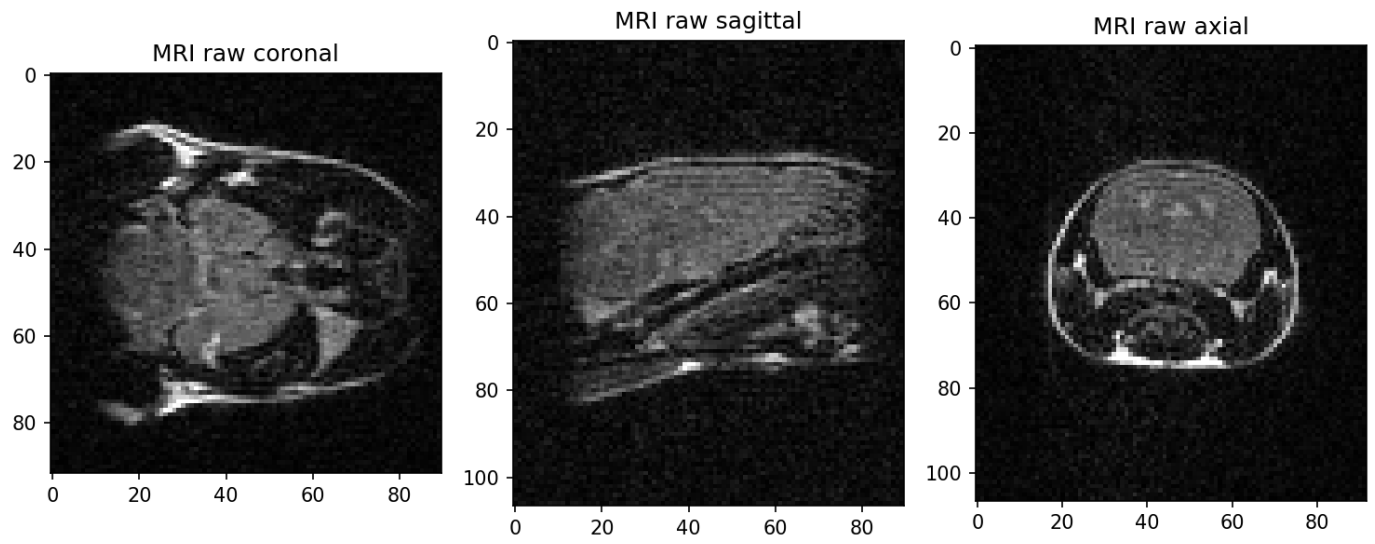


Figure 3.17: Raw MRI image, Timepoint:Week\_07, Sequence type: T2

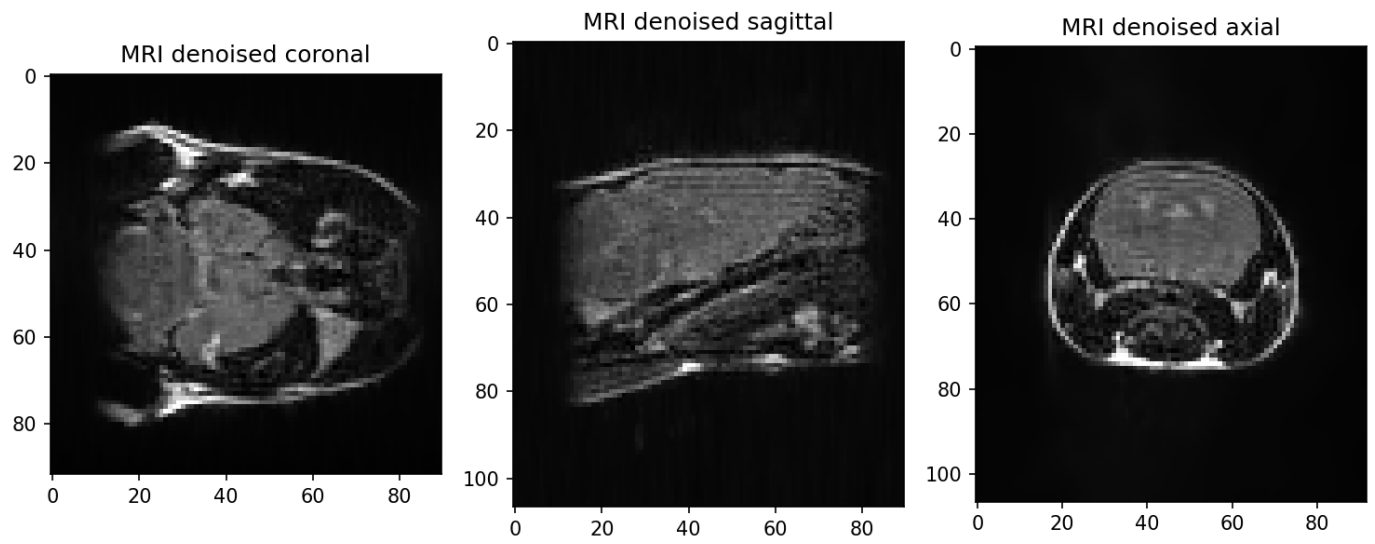


Figure 3.18: Denoised MRI image, Timepoint:Week\_07, Sequence type: T2

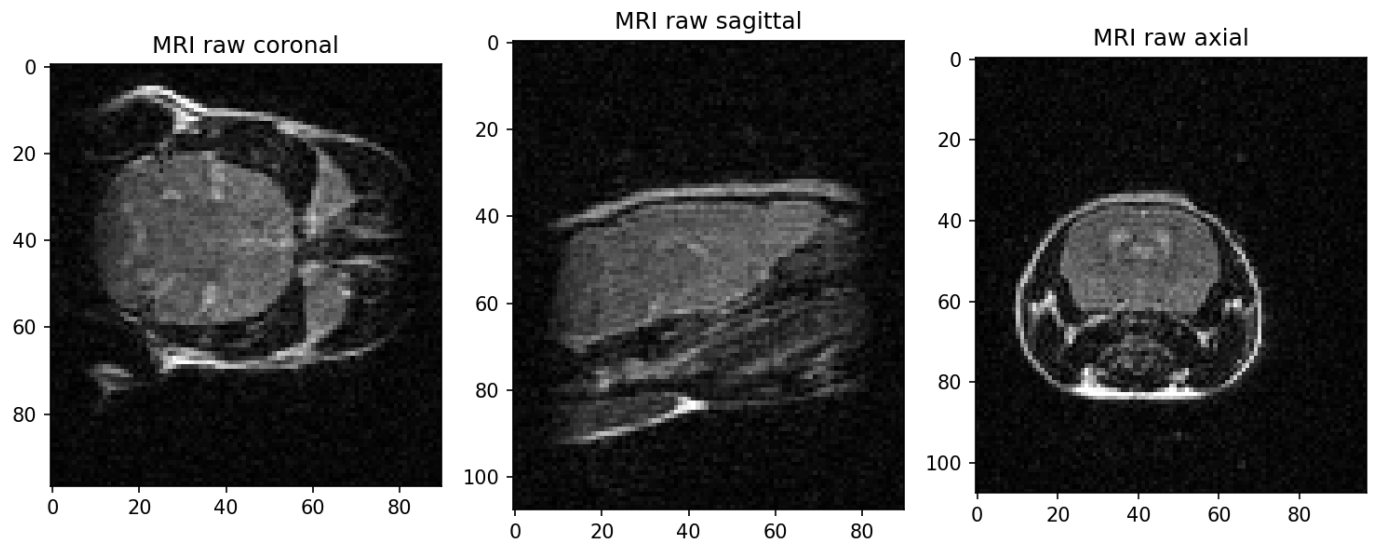


Figure 3.19: Raw MRI image, Timepoint:Week\_13, Sequence type: T2

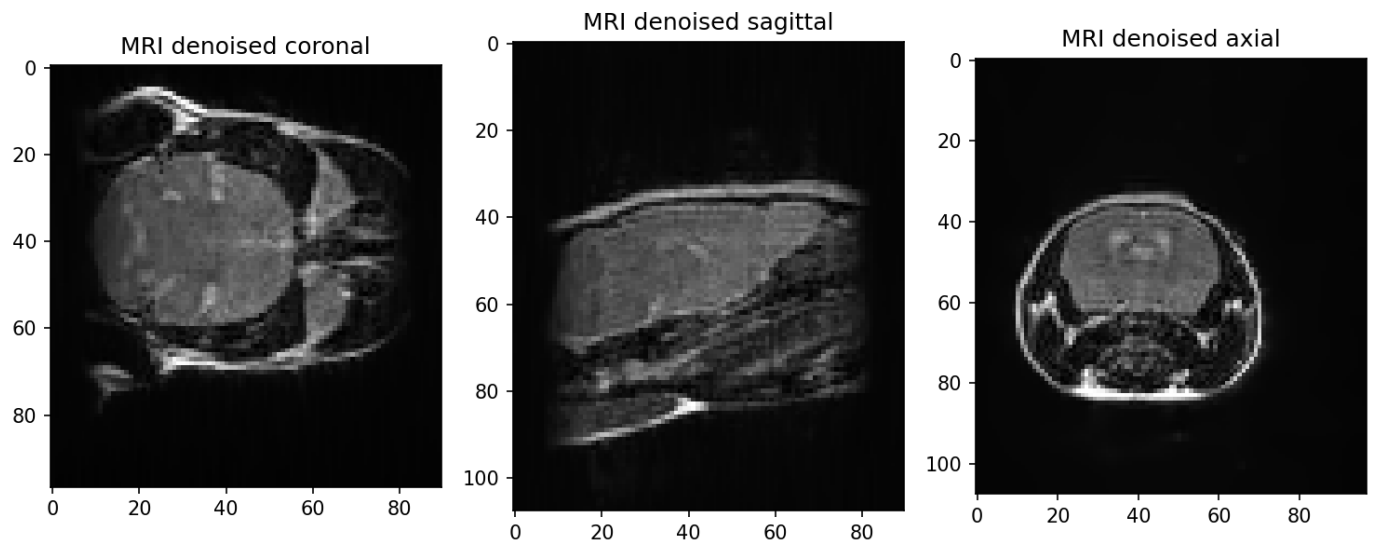


Figure 3.20: Denoised MRI image, Timepoint:Week\_13, Sequence type: T2

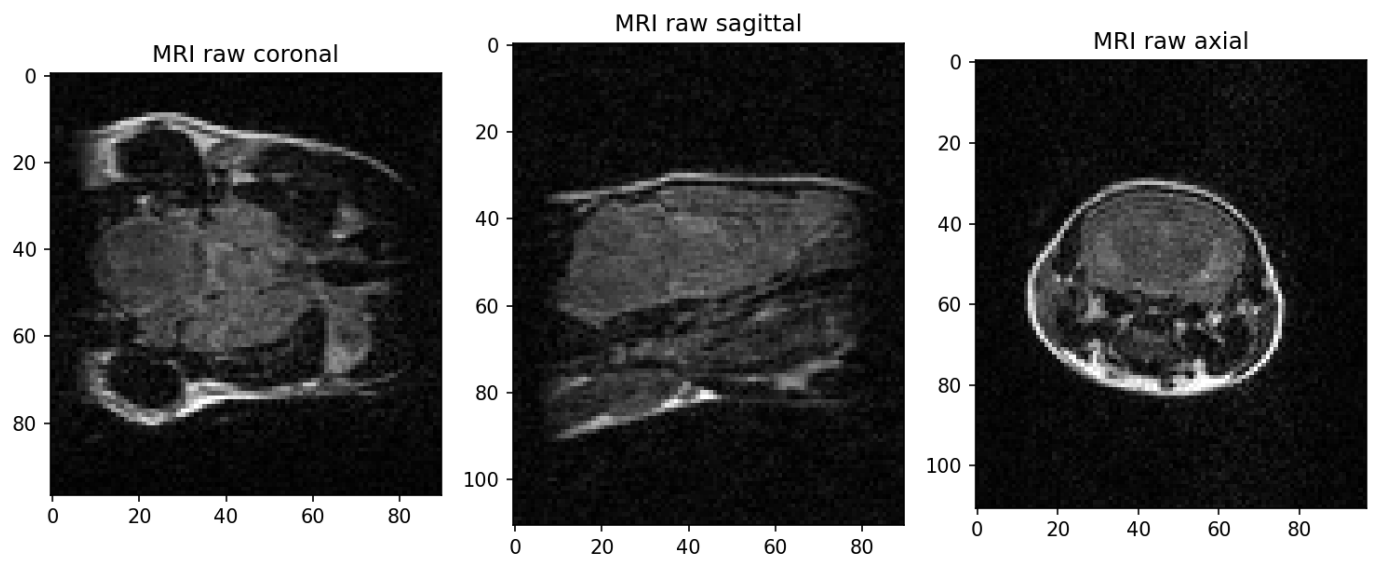


Figure 3.21: Raw MRI image, Timepoint:Week\_19, Sequence type: T2

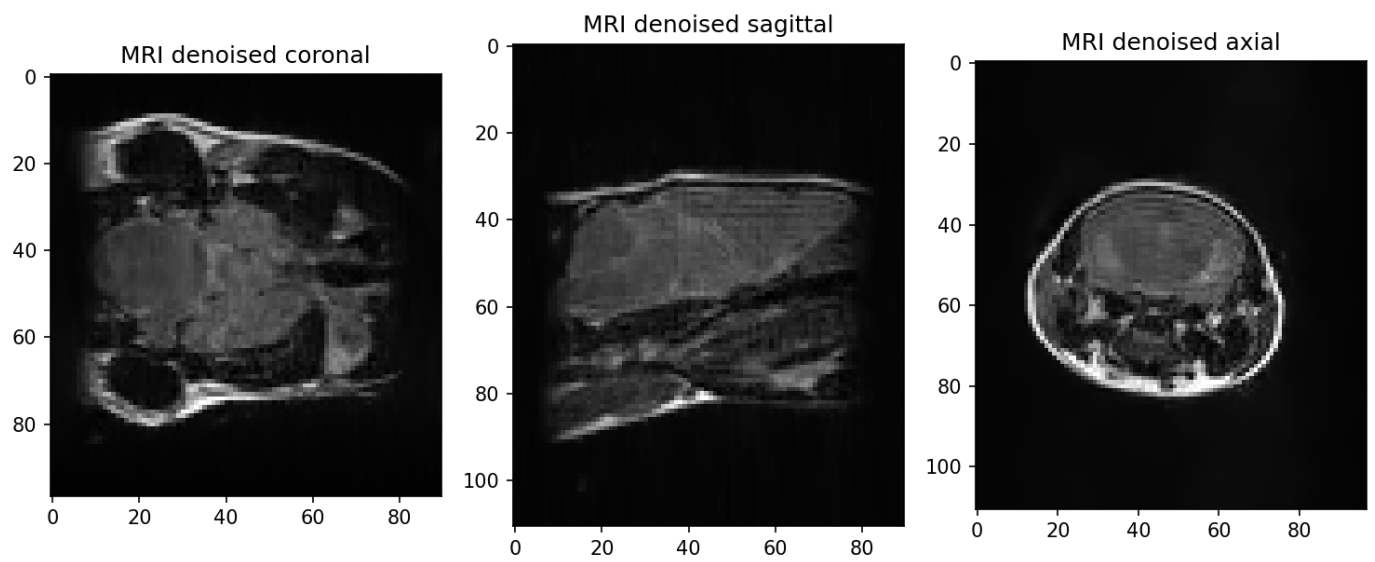


Figure 3.22: Denoised MRI image, Timepoint:Week\_19, Sequence type: T2

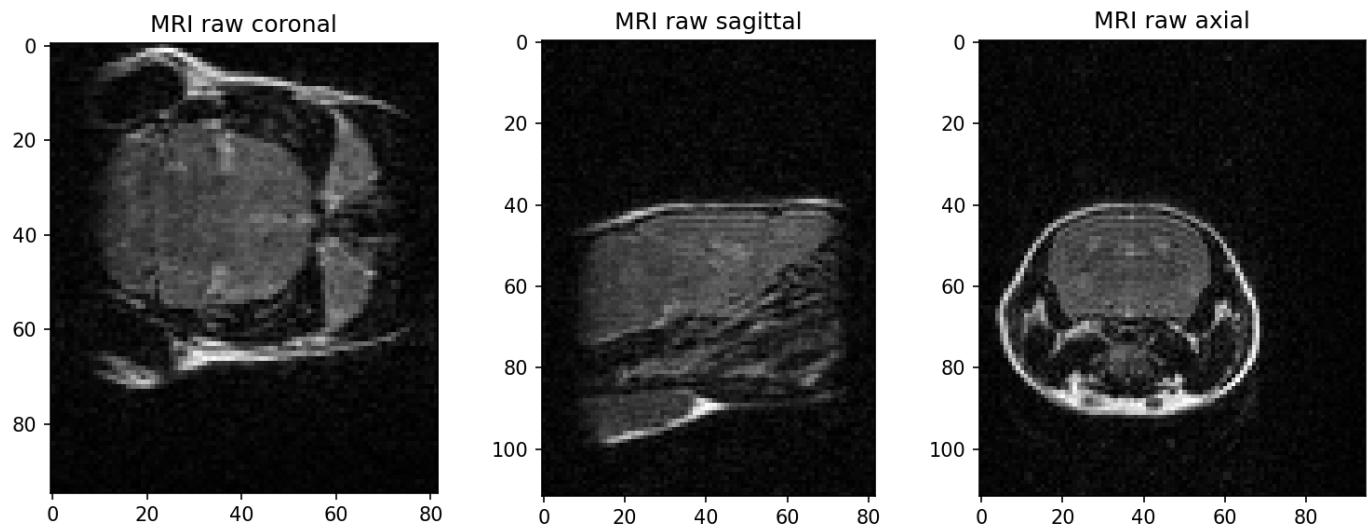


Figure 3.23: Raw MRI image, Timepoint:Week\_25, Sequence type: T2

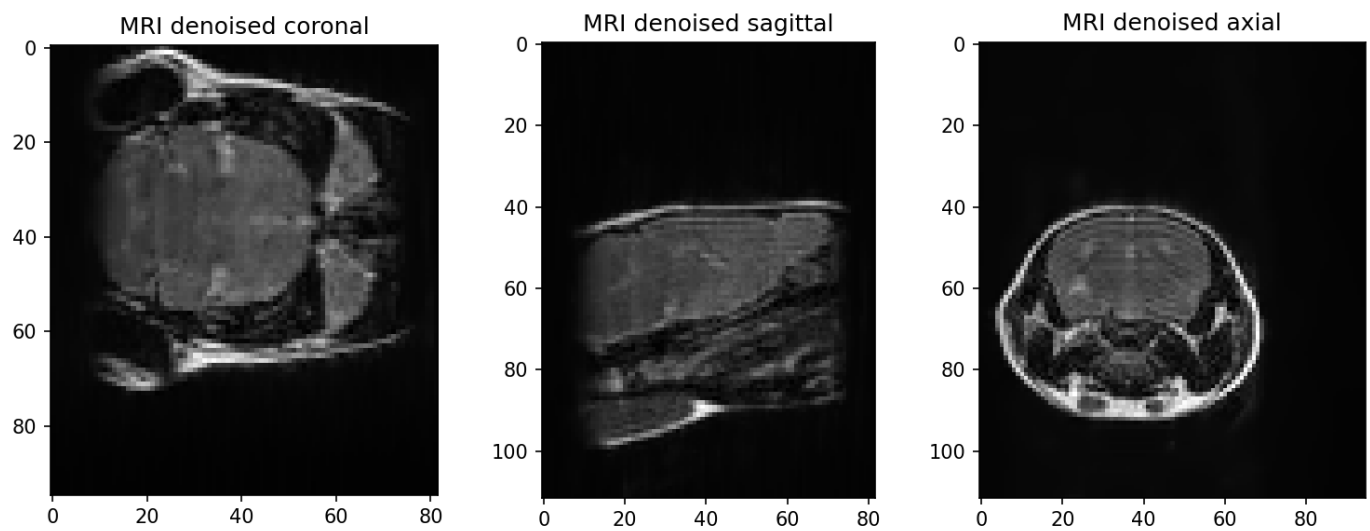


Figure 3.24: Denoised MRI image, Timepoint:Week\_25, Sequence type: T2

## 3.2 Registration (timepoints)

### 3.2.1 Sequence type: T1

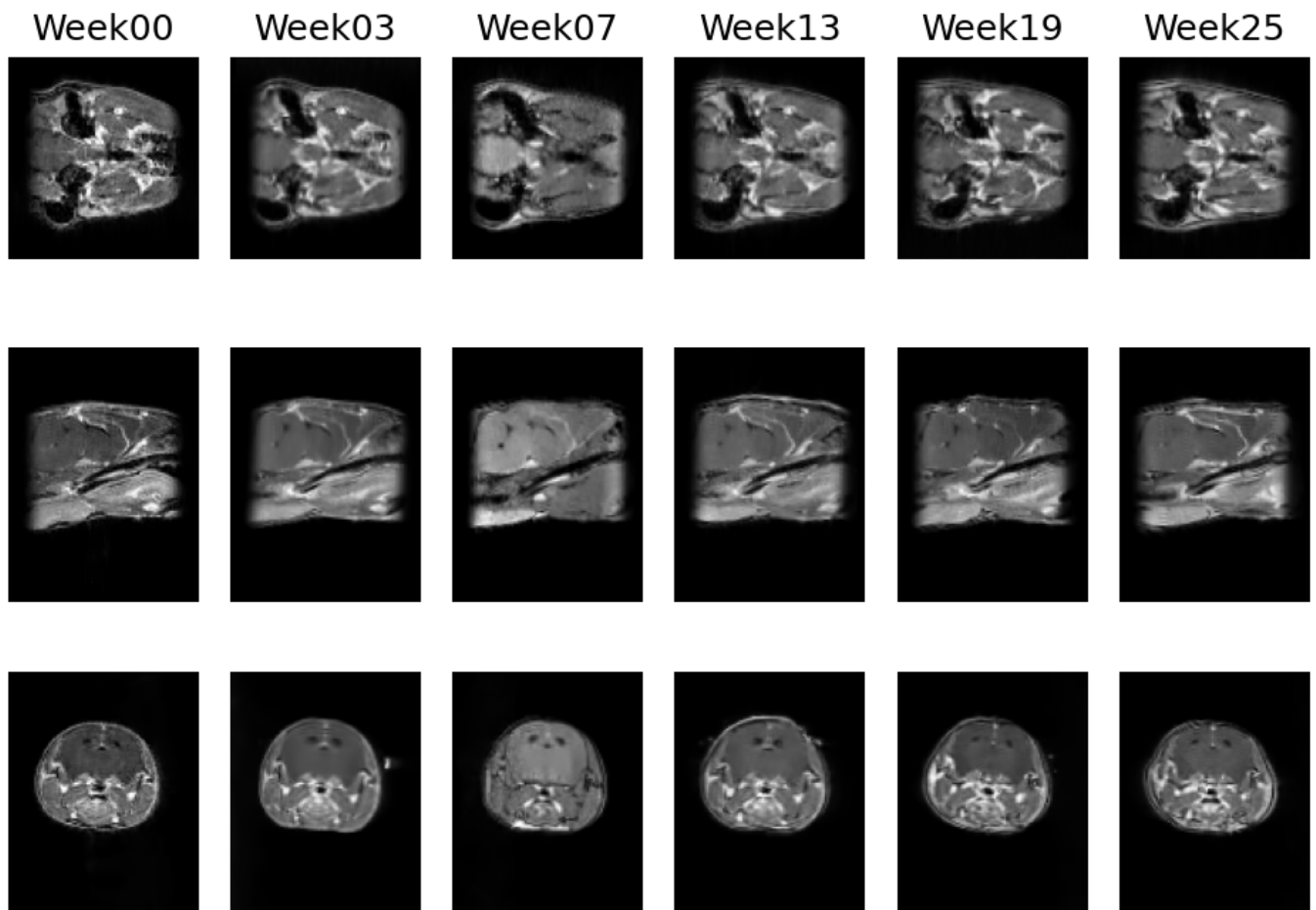


Figure 3.25: Gallery of registered MRI images , Sequence type: T1

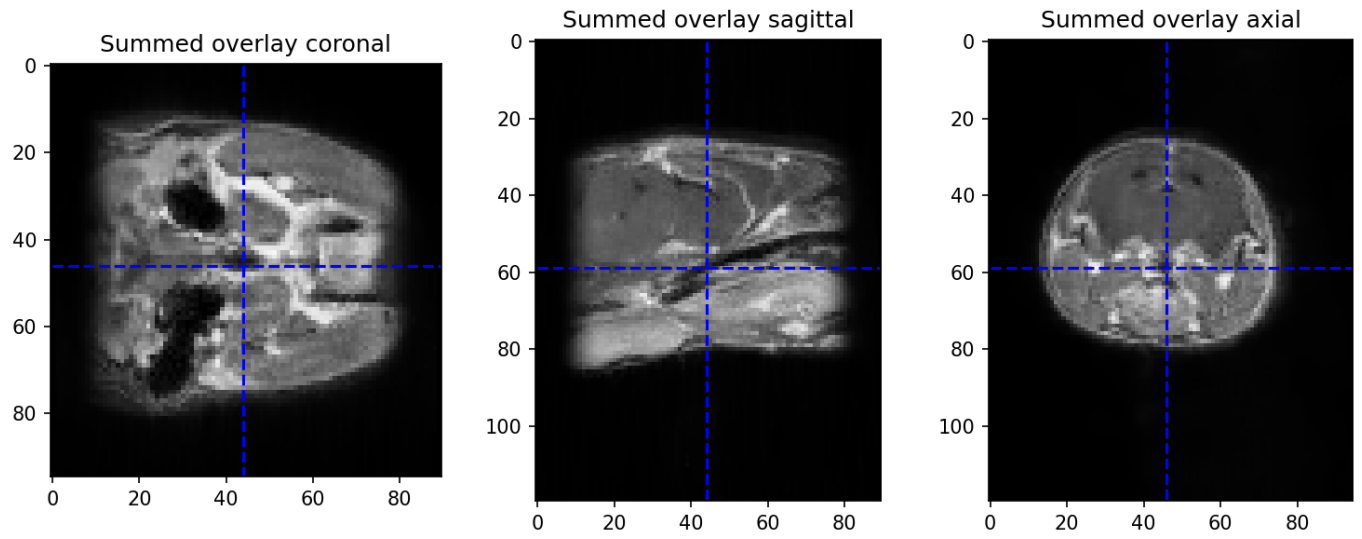


Figure 3.26: Summed overlay of registered MRI images , Sequence type: T1

### 3.2.2 Sequence type: T2

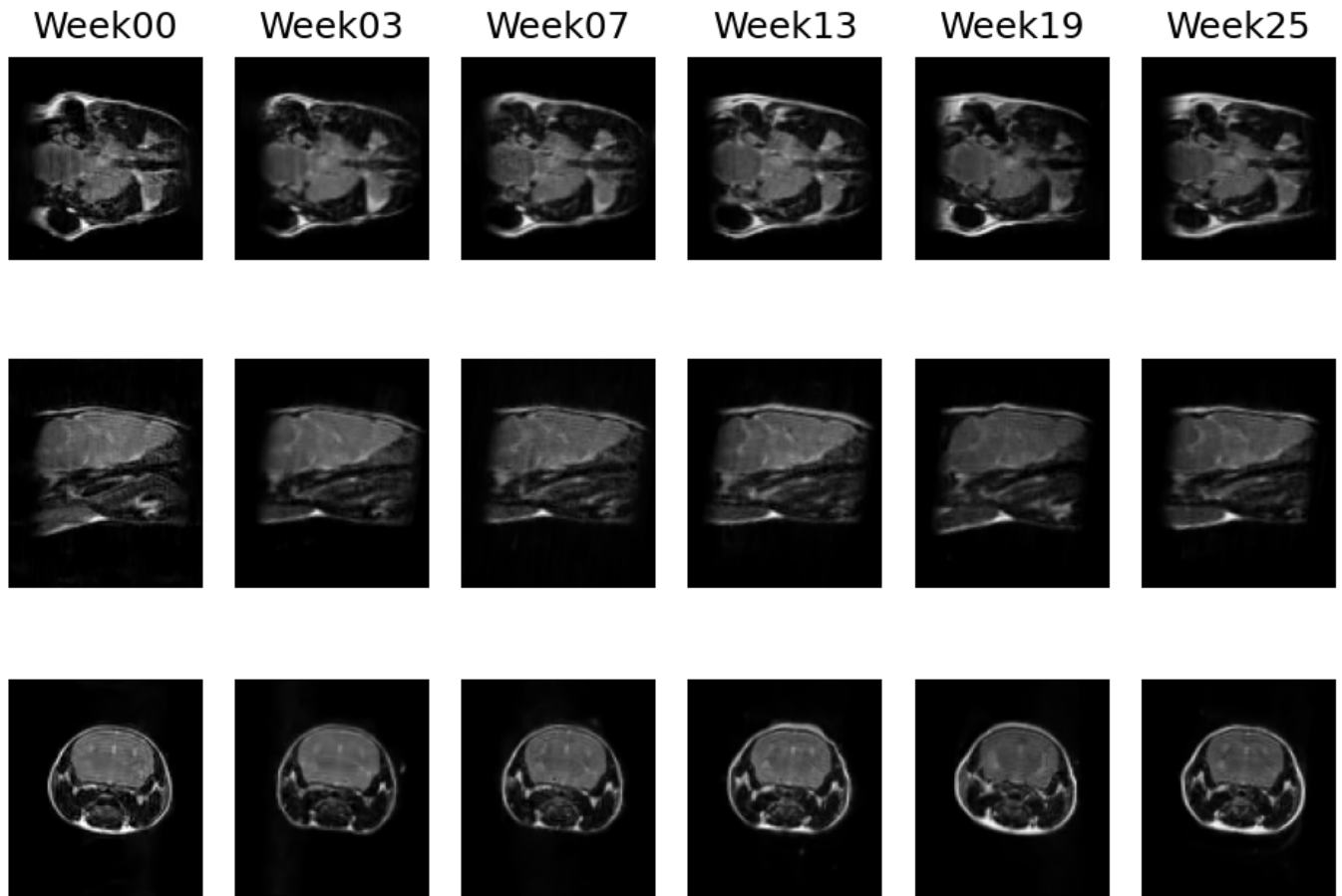


Figure 3.27: Gallery of registered MRI images , Sequence type: T2

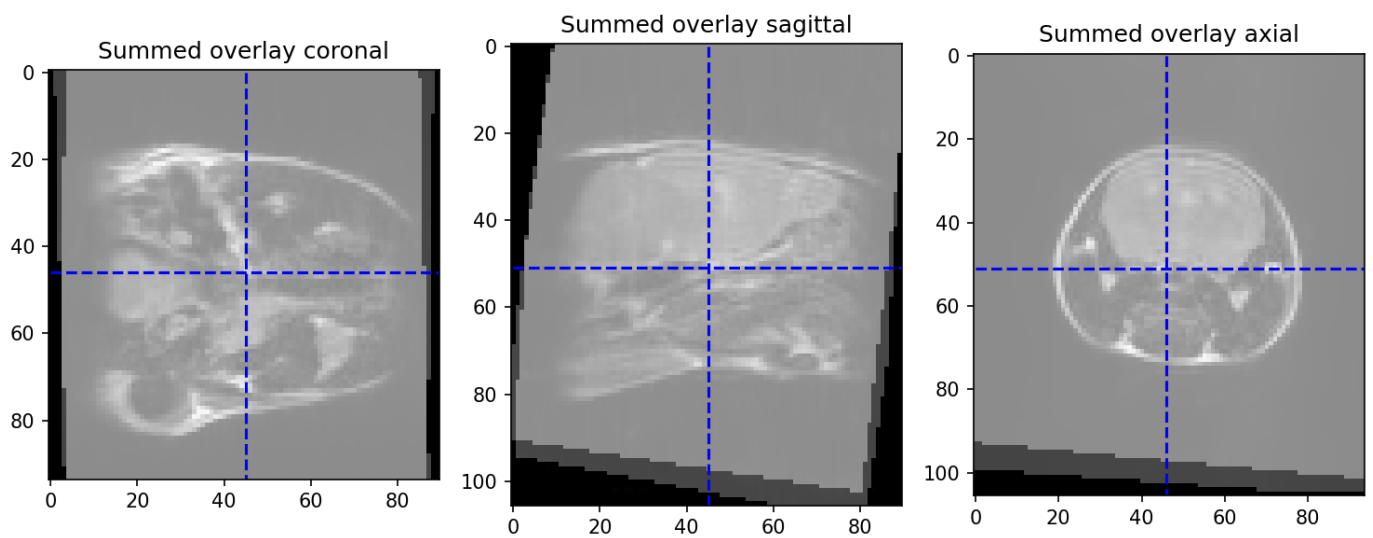


Figure 3.28: Summed overlay of registered MRI images , Sequence type: T2

### 3.3 Warping to CBCT

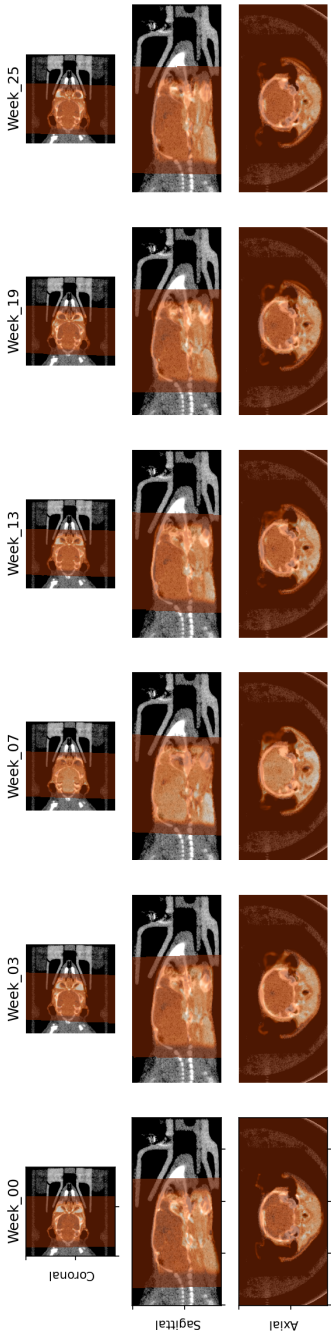


Figure 3.29: Gallery of CBCT (gray) and warped MRI images (orange) , Sequence type: T1

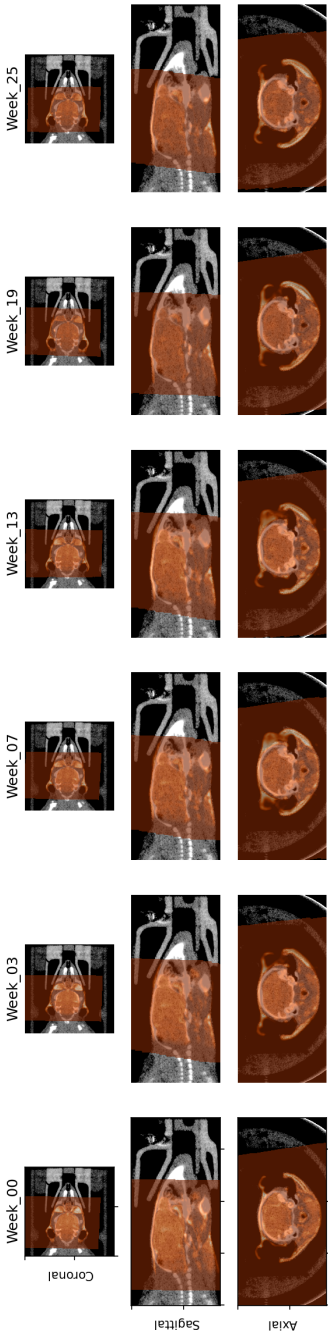


Figure 3.30: Gallery of CBCT (gray) and warped MRI images (orange) , Sequence type: T2

## 4 Histology image data

### 4.1 Bundle registration

Number of section locations:30

Stainings for this sample:

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

**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.

#### 4.1.1 0001\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0001-Scene-1.czi
- P2-A-C3H-M8\_NOK-0001-Scene-1.czi
- P2A\_C3H\_M8\_HE-0001-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

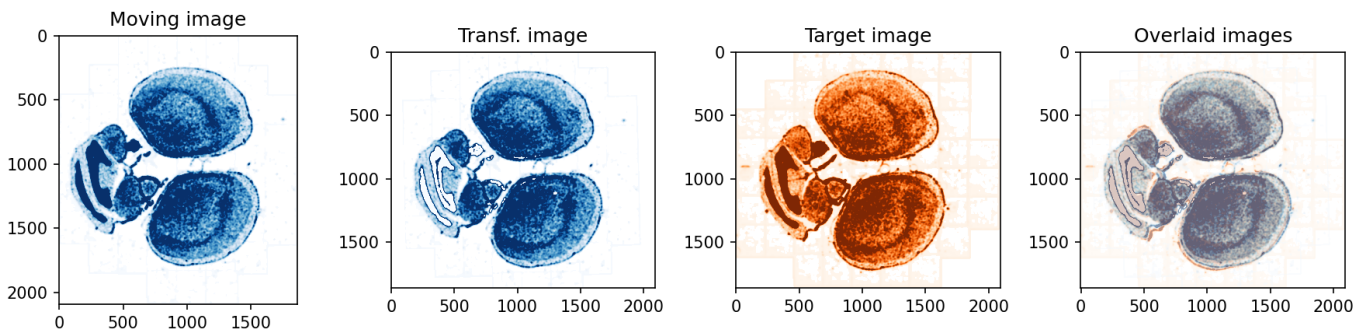


Figure 4.1: Results of registration of image P2-A-C3H-M8\_NOK-0001-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0001-Scene-1 (Target image)

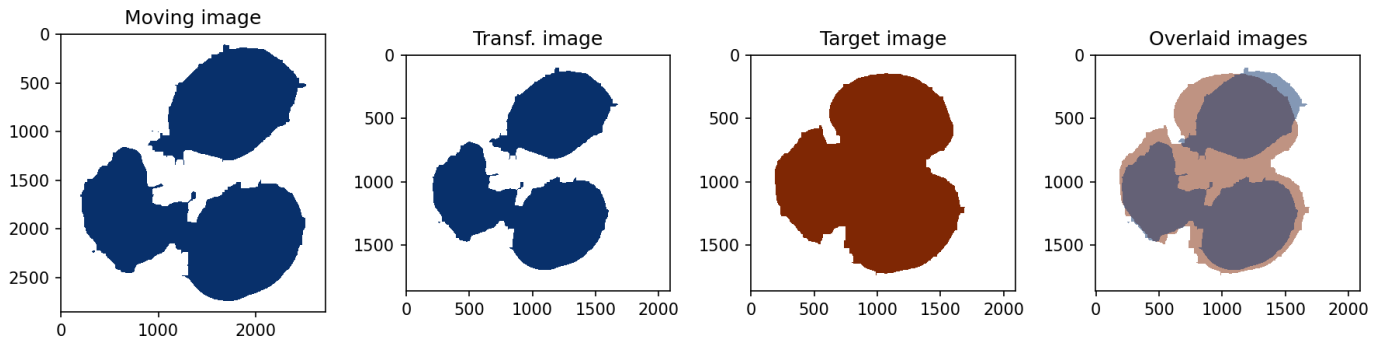


Figure 4.2: Results of registration of image P2A\_C3H\_M8\_HE-0001-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0001-Scene-1 (Target image)

#### 4.1.2 0001\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0001-Scene-2.czi
- P2-A-C3H-M8\_NOK-0001-Scene-2.czi
- P2A\_C3H\_M8\_HE-0001-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

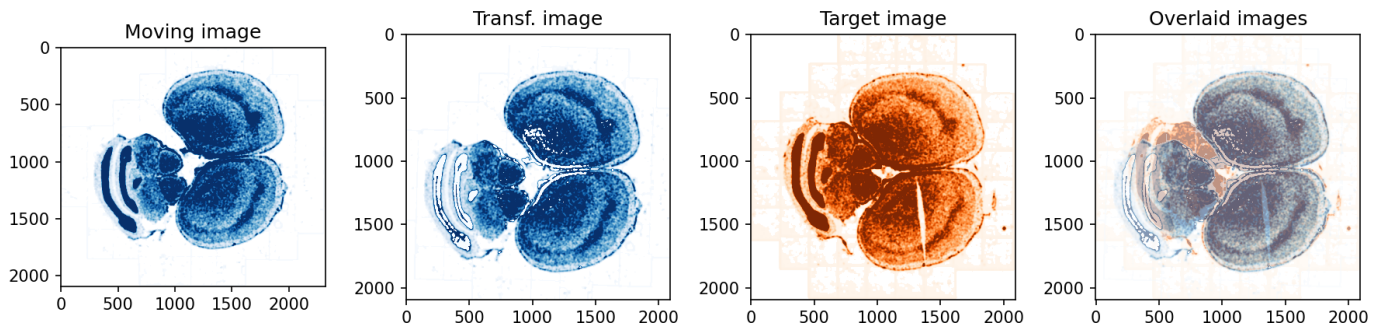


Figure 4.3: Results of registration of image P2-A-C3H-M8\_NOK-0001-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0001-Scene-2 (Target image)

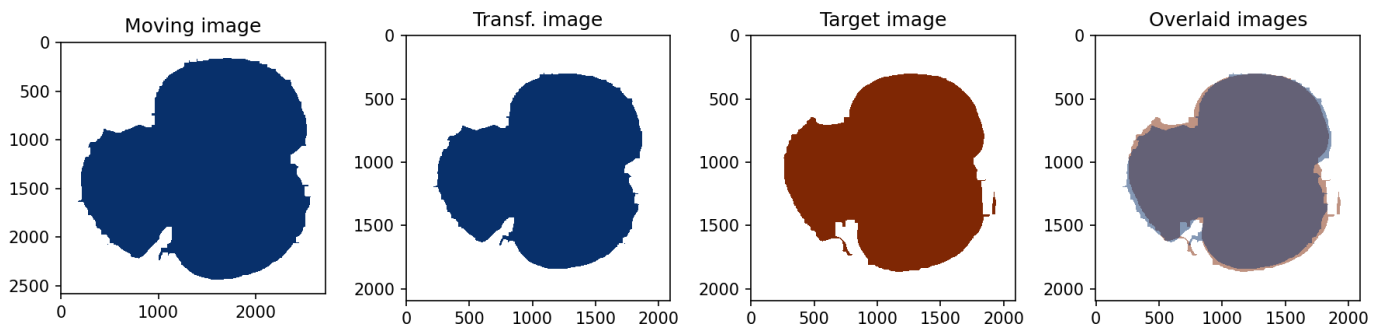


Figure 4.4: Results of registration of image P2A\_C3H\_M8\_HE-0001-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0001-Scene-2 (Target image)

### 4.1.3 0002\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0002-Scene-1.czi
- P2-A-C3H-M8\_NOK-0002-Scene-1.czi
- P2A\_C3H\_M8\_HE-0002-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

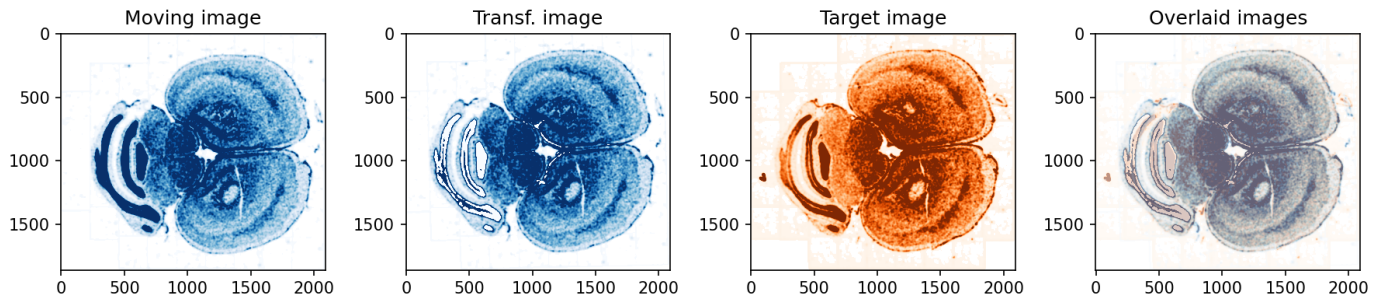


Figure 4.5: Results of registration of image P2-A-C3H-M8\_NOK-0002-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0002-Scene-1 (Target image)

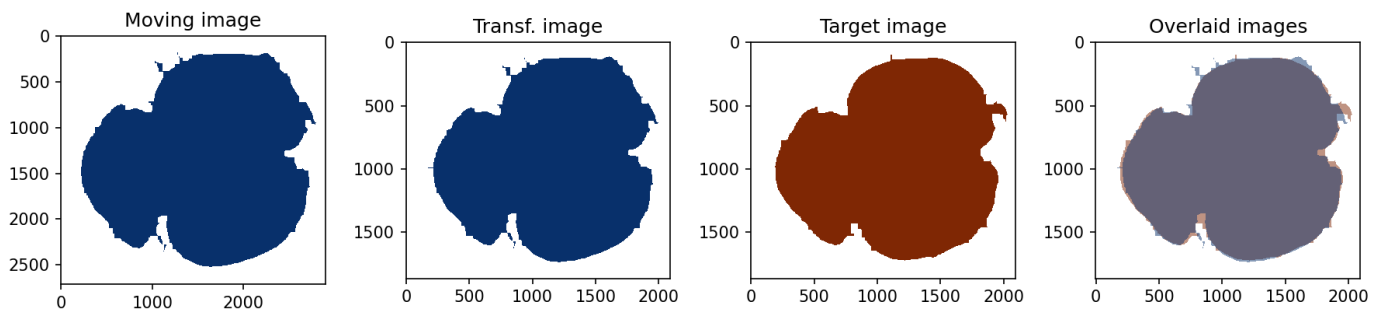


Figure 4.6: Results of registration of image P2A\_C3H\_M8\_HE-0002-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0002-Scene-1 (Target image)

### 4.1.4 0002\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0002-Scene-2.czi
- P2-A-C3H-M8\_NOK-0002-Scene-2.czi
- P2A\_C3H\_M8\_HE-0002-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

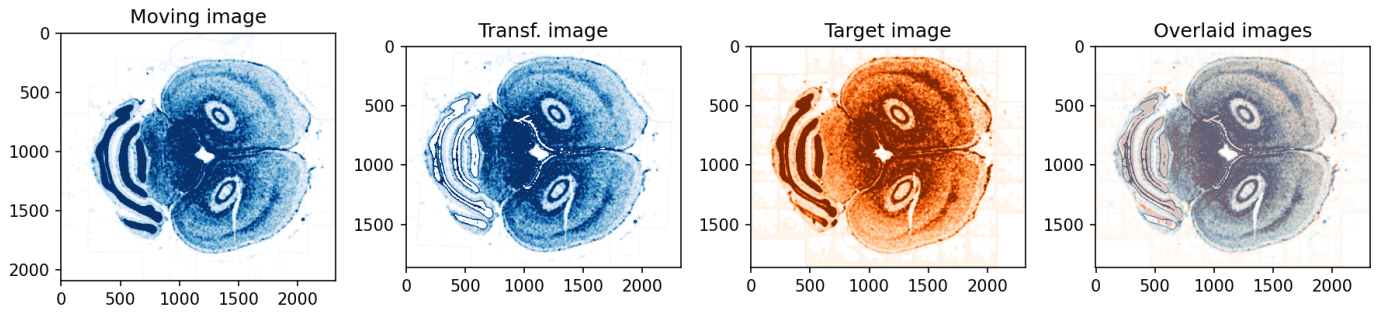


Figure 4.7: Results of registration of image P2-A-C3H-M8\_NOK-0002-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0002-Scene-2 (Target image)

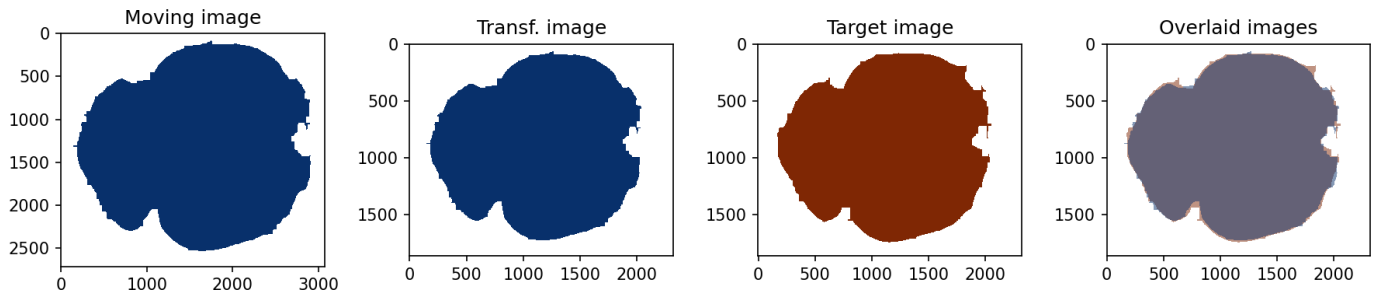


Figure 4.8: Results of registration of image P2A\_C3H\_M8\_HE-0002-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0002-Scene-2 (Target image)

#### 4.1.5 0003\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0003-Scene-1.czi
- P2-A-C3H-M8\_NOK-0003-Scene-1.czi
- P2A\_C3H\_M8\_HE-0003-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

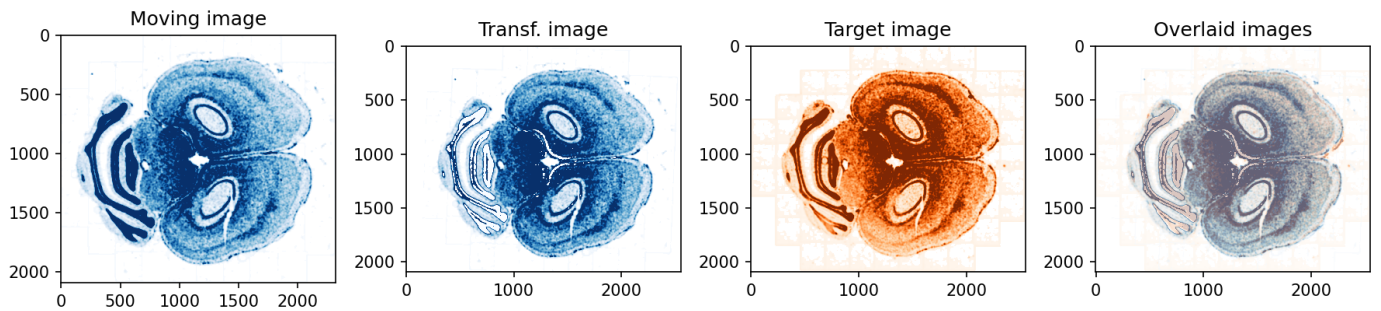


Figure 4.9: Results of registration of image P2-A-C3H-M8\_NOK-0003-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0003-Scene-1 (Target image)

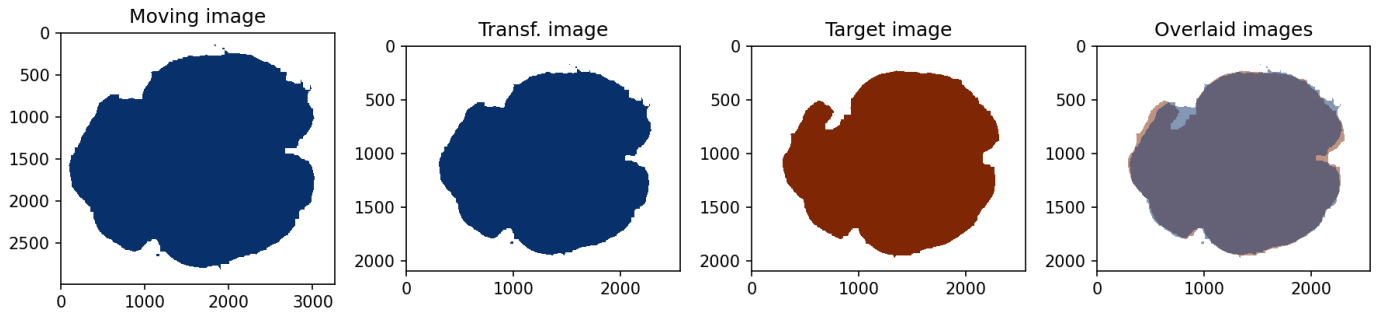


Figure 4.10: Results of registration of image P2A\_C3H\_M8\_HE-0003-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0003-Scene-1 (Target image)

#### 4.1.6 0003\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0003-Scene-2.czi
- P2-A-C3H-M8\_NOK-0003-Scene-2.czi
- P2A\_C3H\_M8\_HE-0003-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

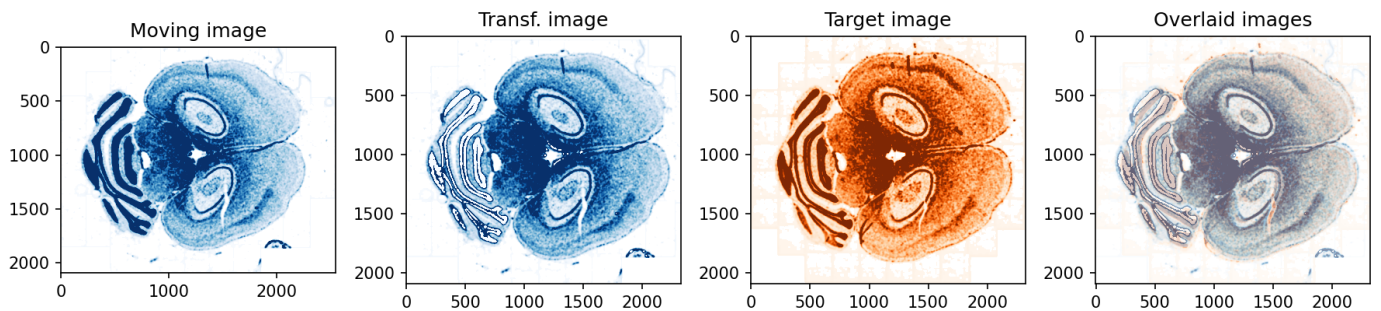


Figure 4.11: Results of registration of image P2-A-C3H-M8\_NOK-0003-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0003-Scene-2 (Target image)

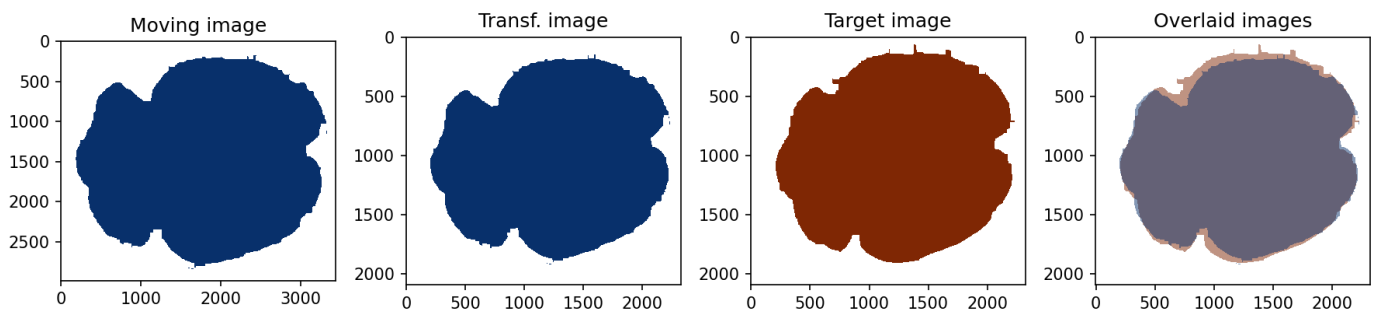


Figure 4.12: Results of registration of image P2A\_C3H\_M8\_HE-0003-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0003-Scene-2 (Target image)

#### 4.1.7 0004\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0004-Scene-1.czi
- P2-A-C3H-M8\_NOK-0004-Scene-1.czi
- P2A\_C3H\_M8\_HE-0004-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

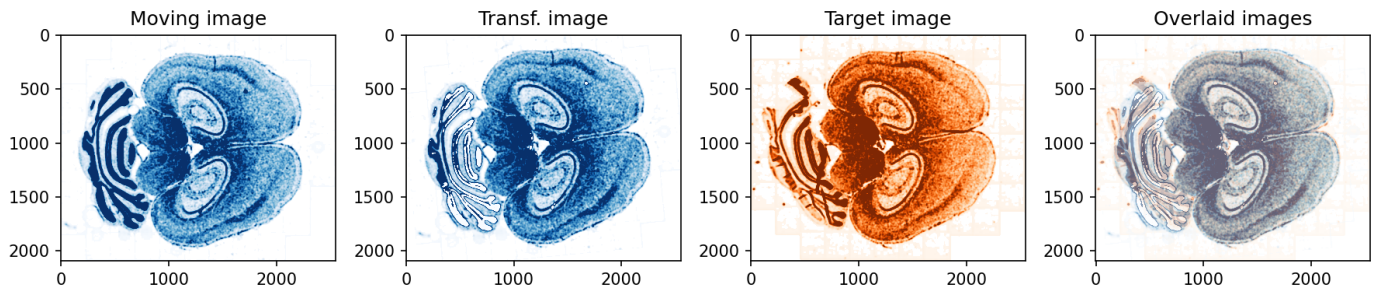


Figure 4.13: Results of registration of image P2-A-C3H-M8\_NOK-0004-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0004-Scene-1 (Target image)

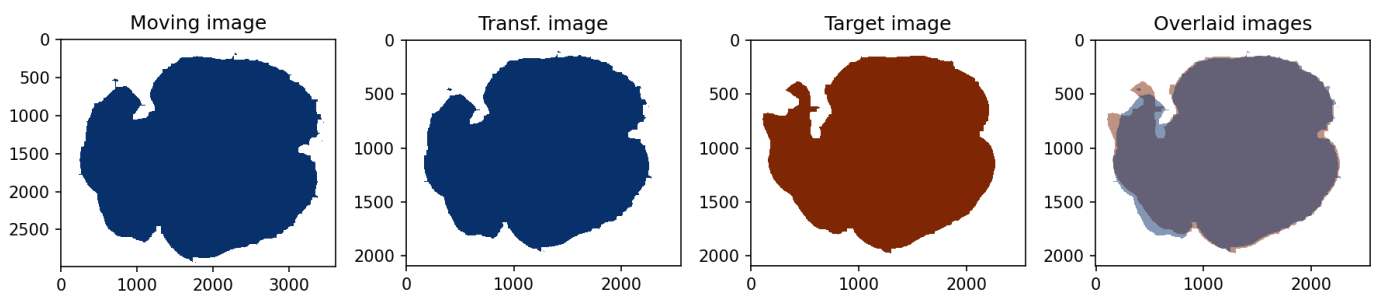


Figure 4.14: Results of registration of image P2A\_C3H\_M8\_HE-0004-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0004-Scene-1 (Target image)

#### 4.1.8 0004\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0004-Scene-2.czi
- P2-A-C3H-M8\_NOK-0004-Scene-2.czi
- P2A\_C3H\_M8\_HE-0004-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

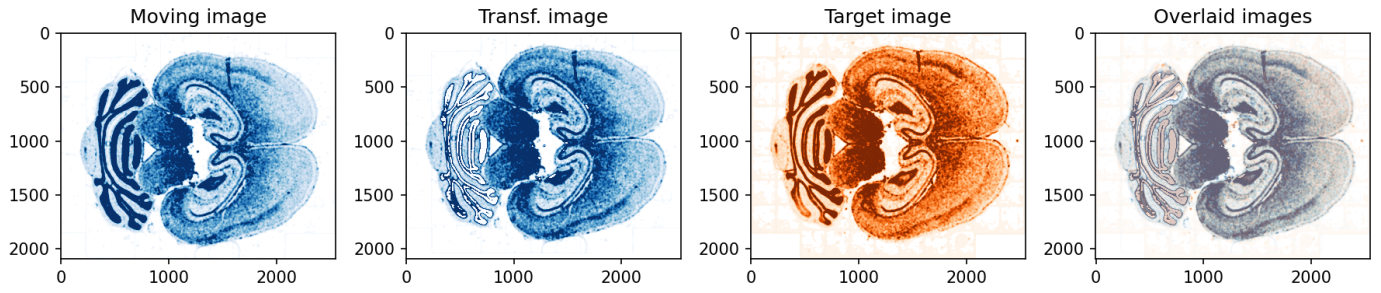


Figure 4.15: Results of registration of image P2-A-C3H-M8\_NOK-0004-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0004-Scene-2 (Target image)

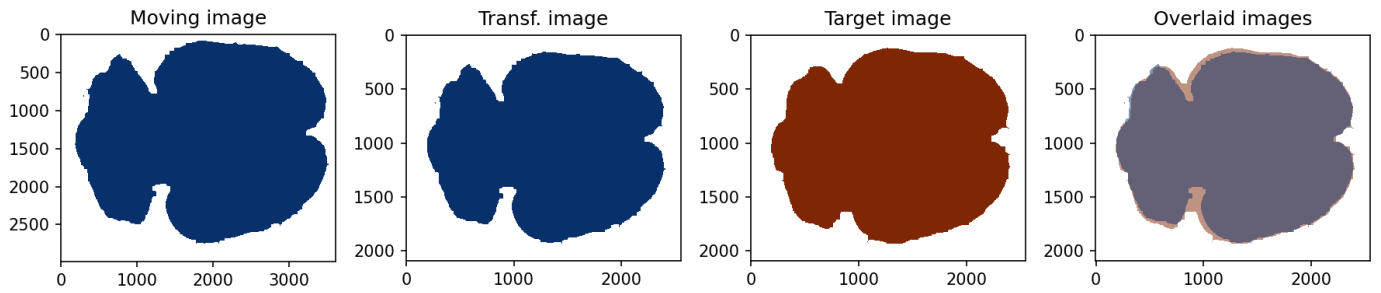


Figure 4.16: Results of registration of image P2A\_C3H\_M8\_HE-0004-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0004-Scene-2 (Target image)

#### 4.1.9 0005\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0005-Scene-1.czi
- P2-A-C3H-M8\_NOK-0005-Scene-1.czi
- P2A\_C3H\_M8\_HE-0005-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

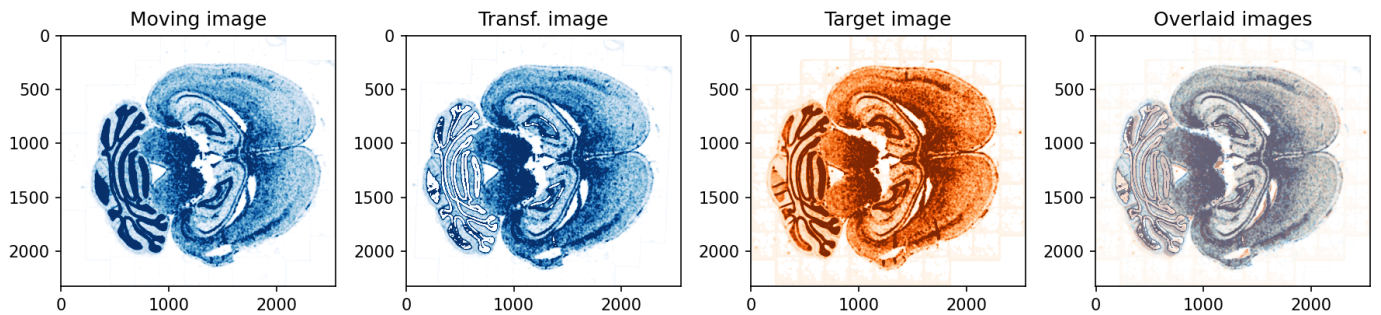


Figure 4.17: Results of registration of image P2-A-C3H-M8\_NOK-0005-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0005-Scene-1 (Target image)

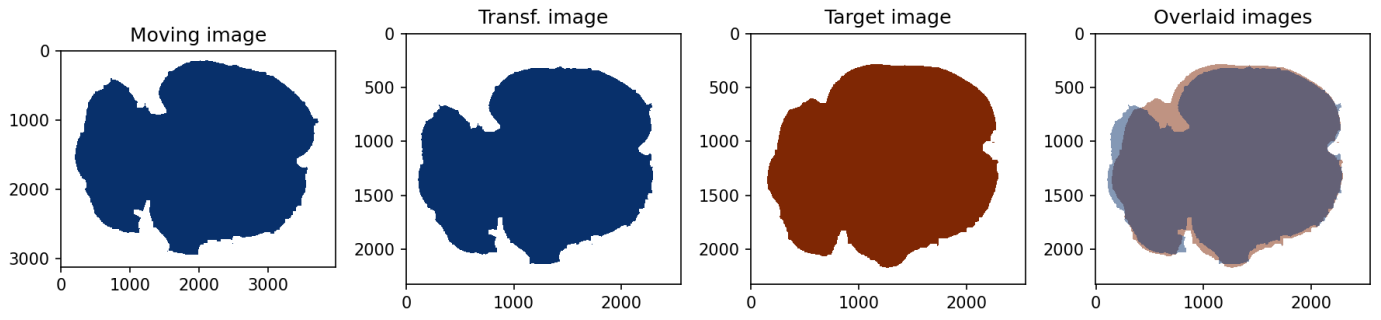


Figure 4.18: Results of registration of image P2A\_C3H\_M8\_HE-0005-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0005-Scene-1 (Target image)

#### 4.1.10 0005\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0005-Scene-2.czi
- P2-A-C3H-M8\_NOK-0005-Scene-2.czi
- P2A\_C3H\_M8\_HE-0005-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

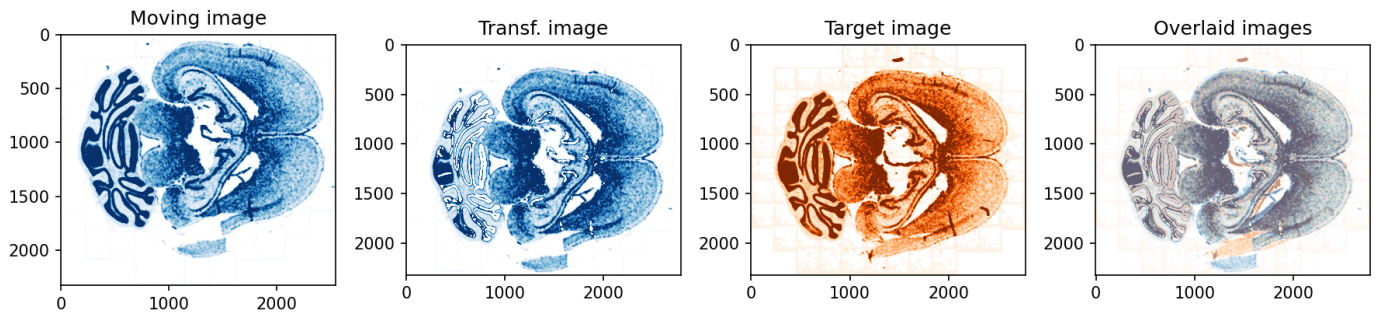


Figure 4.19: Results of registration of image P2-A-C3H-M8\_NOK-0005-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0005-Scene-2 (Target image)

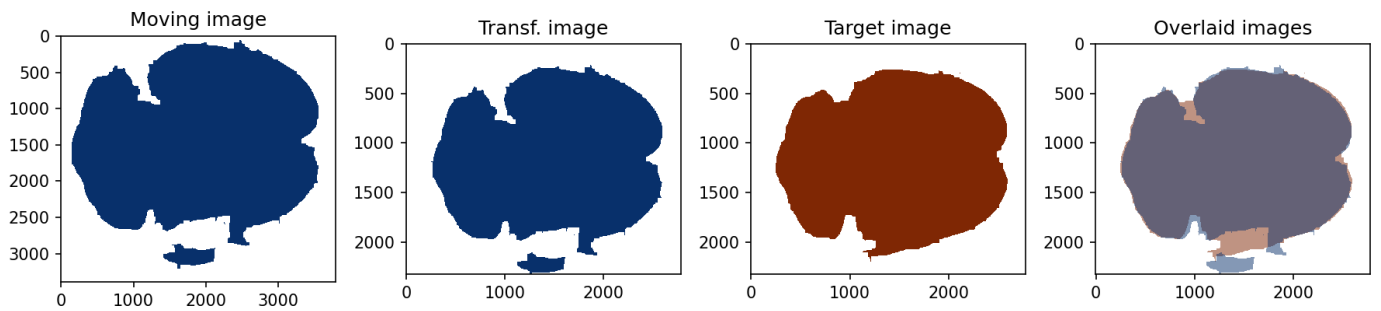


Figure 4.20: Results of registration of image P2A\_C3H\_M8\_HE-0005-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0005-Scene-2 (Target image)

#### 4.1.11 0006\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0006-Scene-1.czi
- P2-A-C3H-M8\_NOK-0006-Scene-1.czi
- P2A\_C3H\_M8\_HE-0006-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

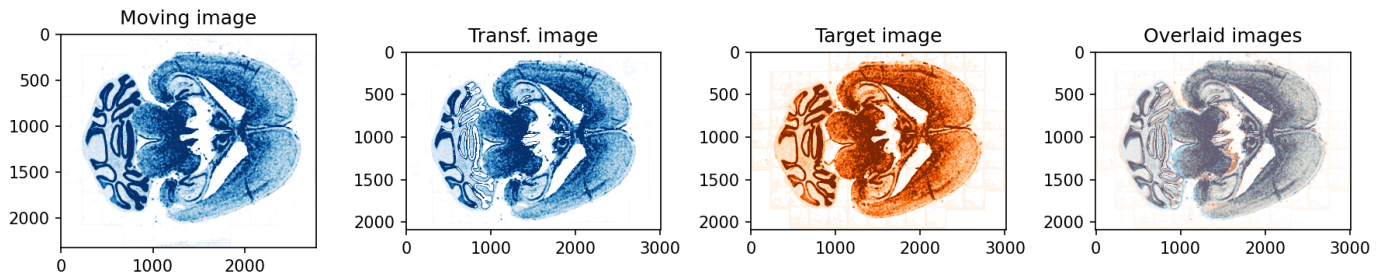


Figure 4.21: Results of registration of image P2-A-C3H-M8\_NOK-0006-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0006-Scene-1 (Target image)

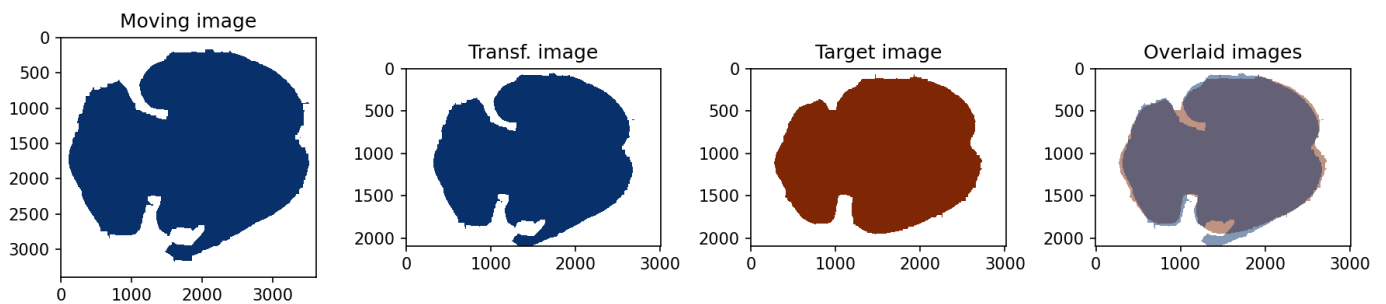


Figure 4.22: Results of registration of image P2A\_C3H\_M8\_HE-0006-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0006-Scene-1 (Target image)

#### 4.1.12 0006\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0006-Scene-2.czi
- P2-A-C3H-M8\_NOK-0006-Scene-2.czi
- P2A\_C3H\_M8\_HE-0006-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

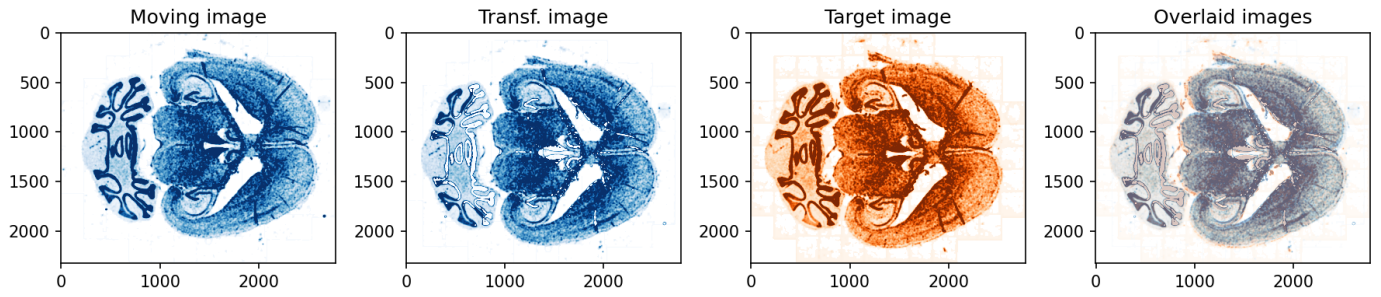


Figure 4.23: Results of registration of image P2-A-C3H-M8\_NOK-0006-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0006-Scene-2 (Target image)

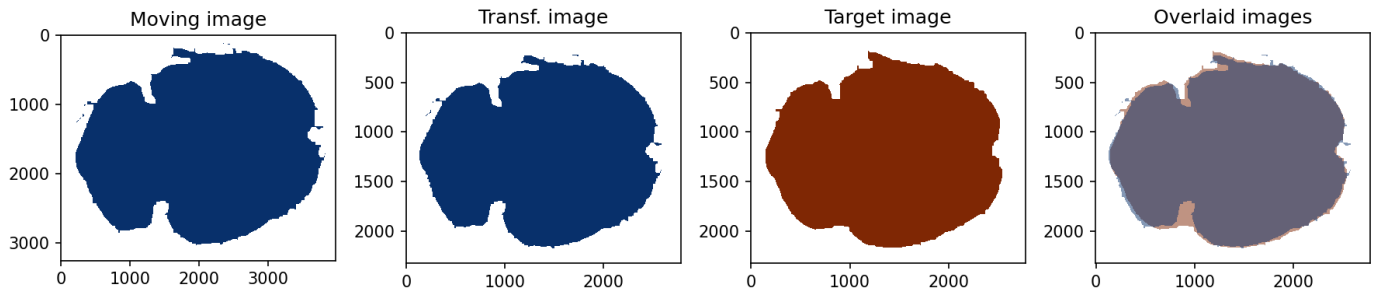


Figure 4.24: Results of registration of image P2A\_C3H\_M8\_HE-0006-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0006-Scene-2 (Target image)

#### 4.1.13 0007\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0007-Scene-1.czi
- P2-A-C3H-M8\_NOK-0007-Scene-1.czi
- P2A\_C3H\_M8\_HE-0007-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

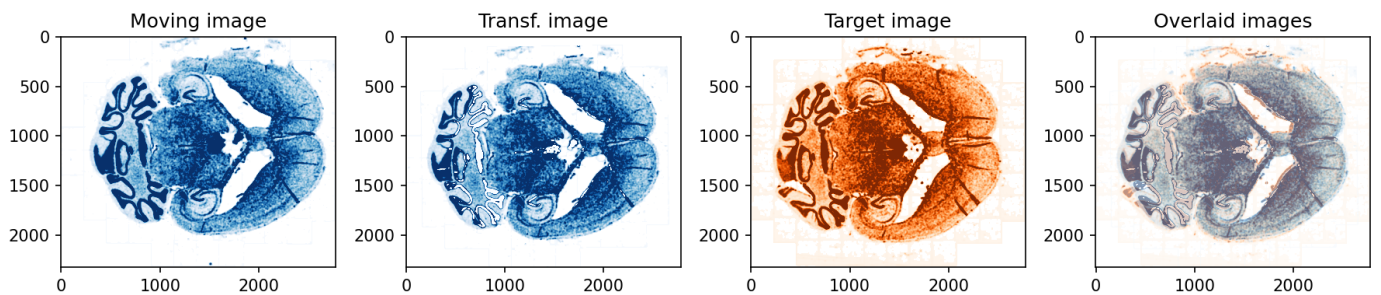


Figure 4.25: Results of registration of image P2-A-C3H-M8\_NOK-0007-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0007-Scene-1 (Target image)

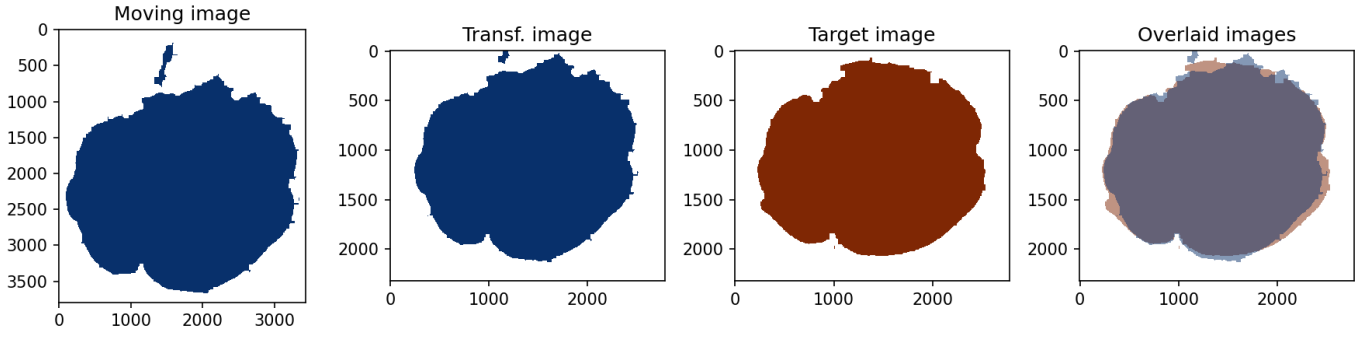


Figure 4.26: Results of registration of image P2A\_C3H\_M8\_HE-0007-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0007-Scene-1 (Target image)

#### 4.1.14 0007\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0007-Scene-2.czi
- P2-A-C3H-M8\_NOK-0007-Scene-2.czi
- P2A\_C3H\_M8\_HE-0007-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

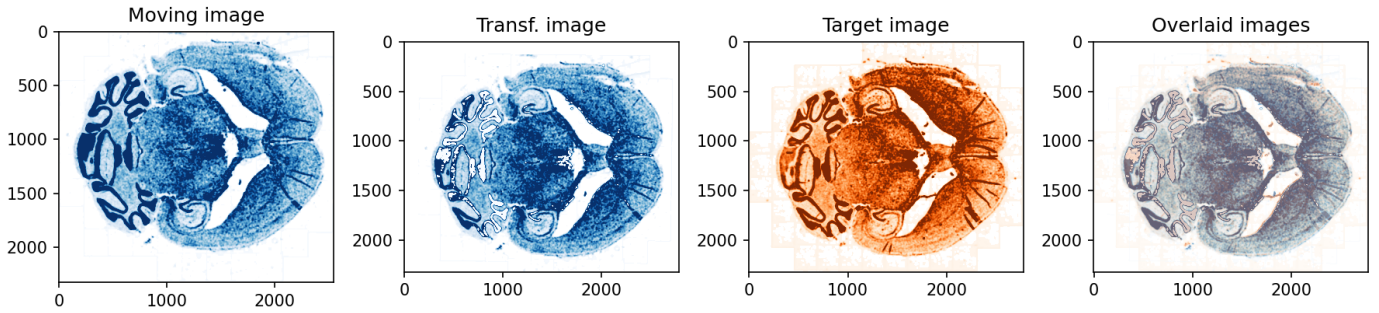


Figure 4.27: Results of registration of image P2-A-C3H-M8\_NOK-0007-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0007-Scene-2 (Target image)

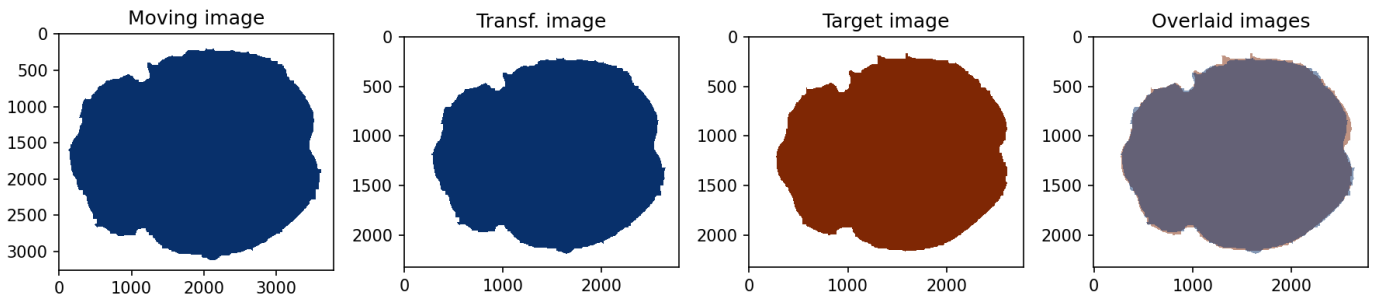


Figure 4.28: Results of registration of image P2A\_C3H\_M8\_HE-0007-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0007-Scene-2 (Target image)

#### 4.1.15 0008\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0008-Scene-1.czi
- P2-A-C3H-M8\_NOK-0008-Scene-1.czi
- P2A\_C3H\_M8\_HE-0008-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

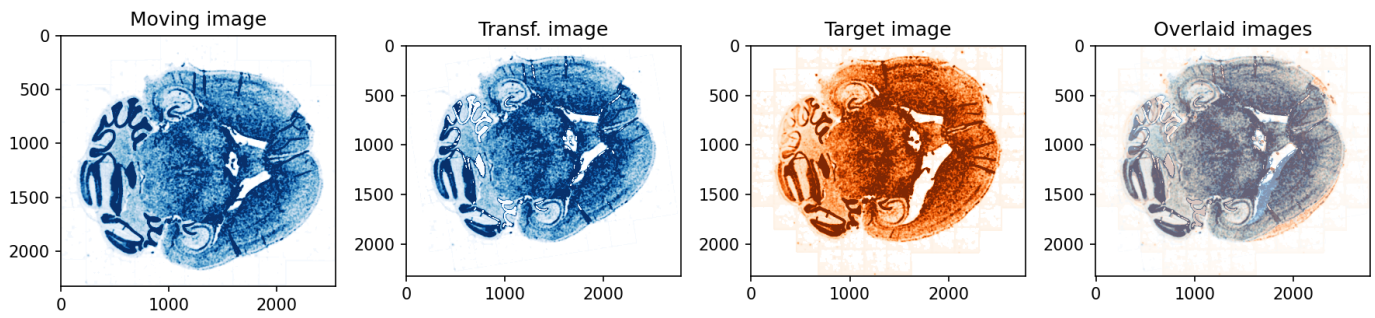


Figure 4.29: Results of registration of image P2-A-C3H-M8\_NOK-0008-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0008-Scene-1 (Target image)

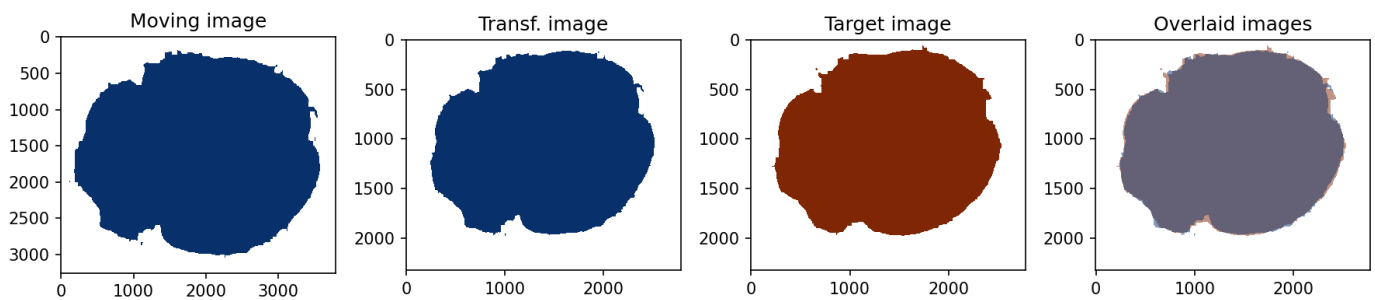


Figure 4.30: Results of registration of image P2A\_C3H\_M8\_HE-0008-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0008-Scene-1 (Target image)

#### 4.1.16 0008\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0008-Scene-2.czi
- P2-A-C3H-M8\_NOK-0008-Scene-2.czi
- P2A\_C3H\_M8\_HE-0008-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

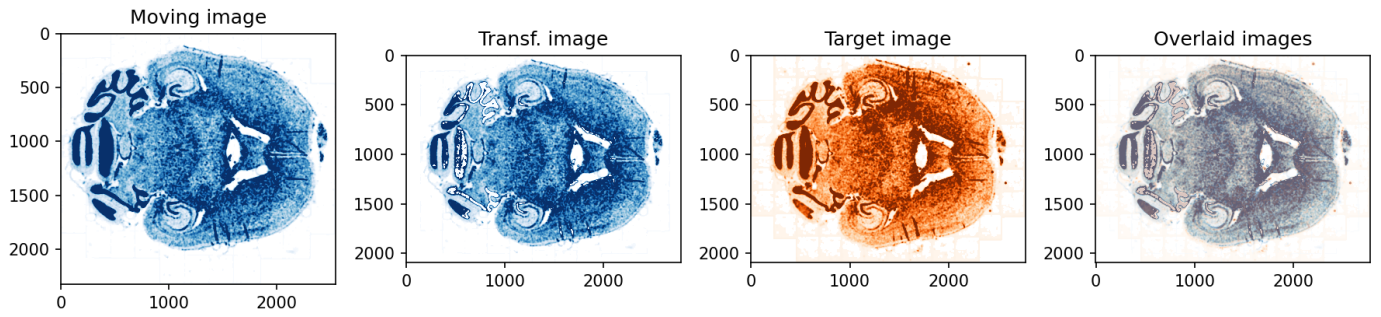


Figure 4.31: Results of registration of image P2-A-C3H-M8\_NOK-0008-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0008-Scene-2 (Target image)

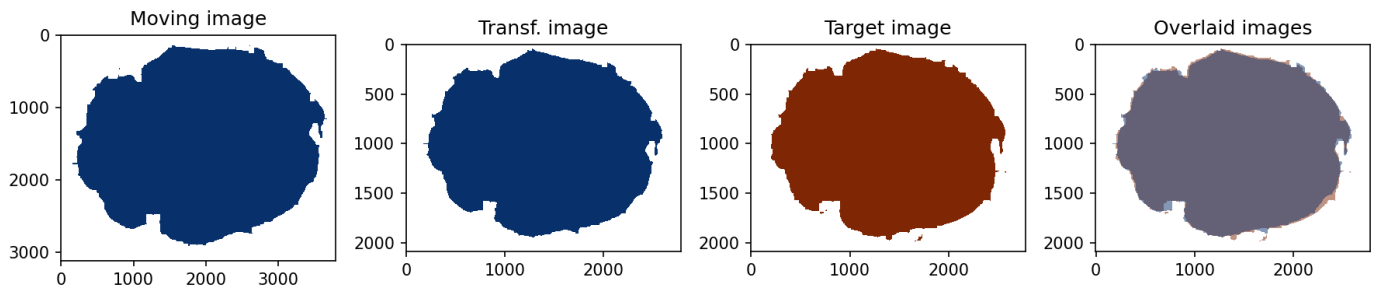


Figure 4.32: Results of registration of image P2A\_C3H\_M8\_HE-0008-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0008-Scene-2 (Target image)

#### 4.1.17 0009\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0009-Scene-1.czi
- P2-A-C3H-M8\_NOK-0009-Scene-1.czi
- P2A\_C3H\_M8\_HE-0009-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

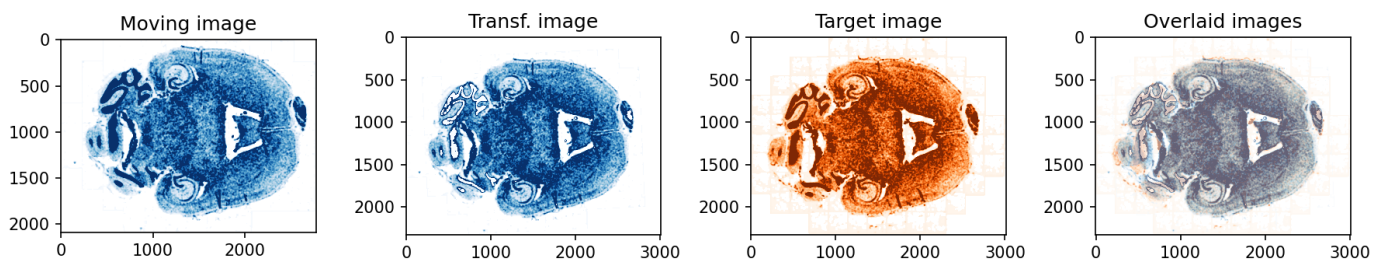


Figure 4.33: Results of registration of image P2-A-C3H-M8\_NOK-0009-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0009-Scene-1 (Target image)

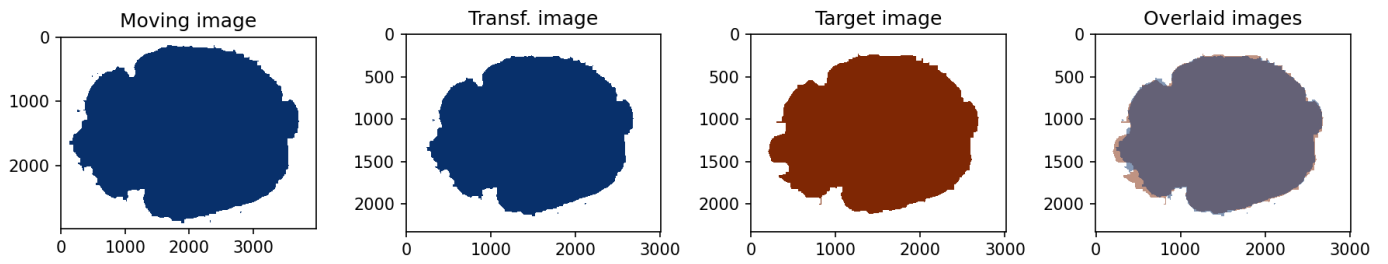


Figure 4.34: Results of registration of image P2A\_C3H\_M8\_HE-0009-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0009-Scene-1 (Target image)

#### 4.1.18 0009\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0009-Scene-2.czi
- P2-A-C3H-M8\_NOK-0009-Scene-2.czi
- P2A\_C3H\_M8\_HE-0009-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

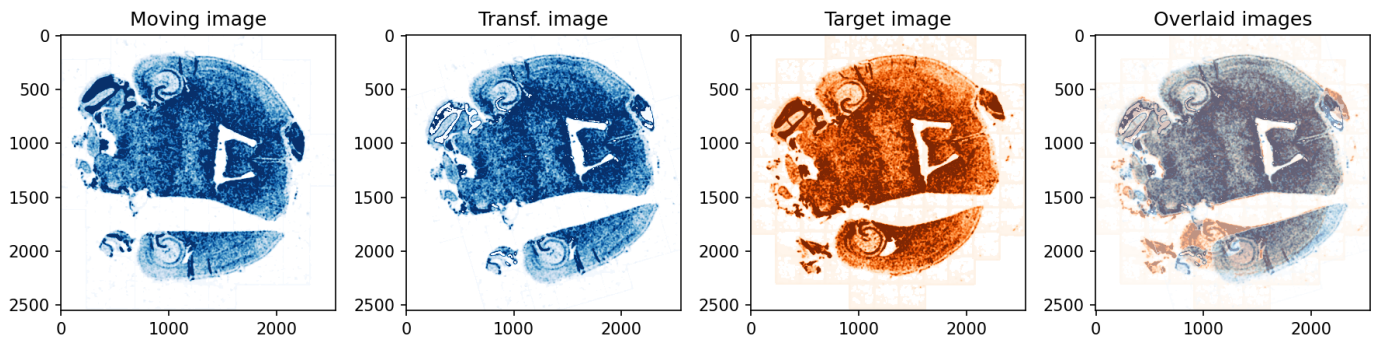


Figure 4.35: Results of registration of image P2-A-C3H-M8\_NOK-0009-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0009-Scene-2 (Target image)

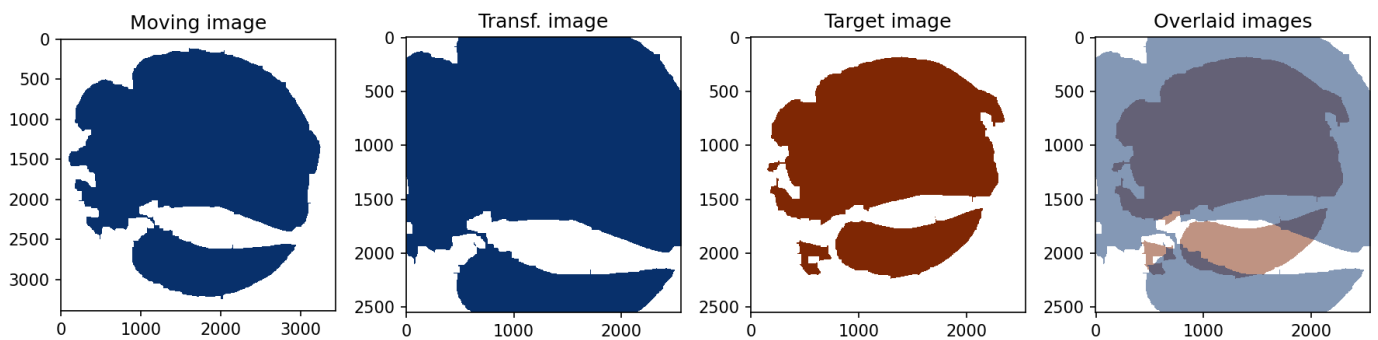


Figure 4.36: Results of registration of image P2A\_C3H\_M8\_HE-0009-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0009-Scene-2 (Target image)

#### 4.1.19 0010\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0010-Scene-1.czi
- P2-A-C3H-M8\_NOK-0010-Scene-1.czi
- P2A\_C3H\_M8\_HE-0010-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

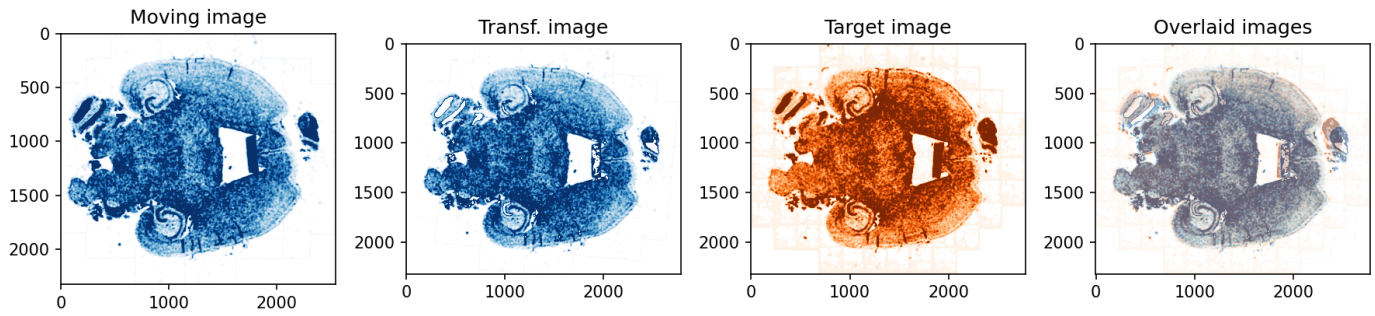


Figure 4.37: Results of registration of image P2-A-C3H-M8\_NOK-0010-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0010-Scene-1 (Target image)

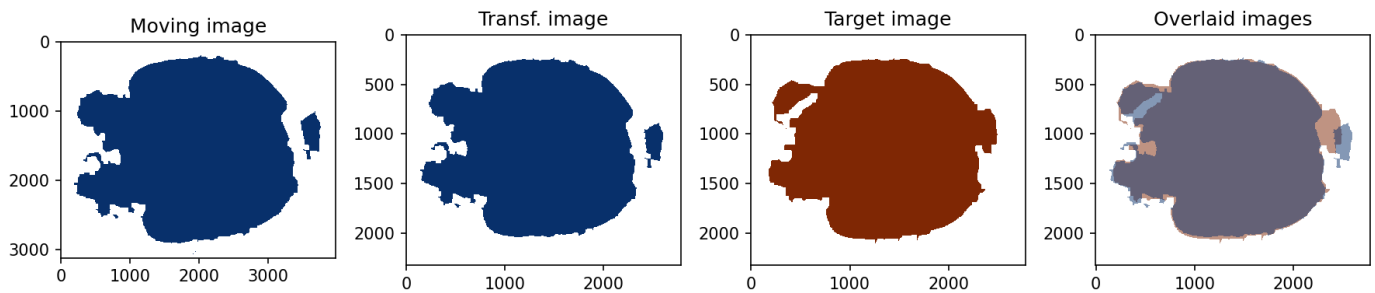


Figure 4.38: Results of registration of image P2A\_C3H\_M8\_HE-0010-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0010-Scene-1 (Target image)

#### 4.1.20 0010\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0010-Scene-2.czi
- P2-A-C3H-M8\_NOK-0010-Scene-2.czi
- P2A\_C3H\_M8\_HE-0010-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

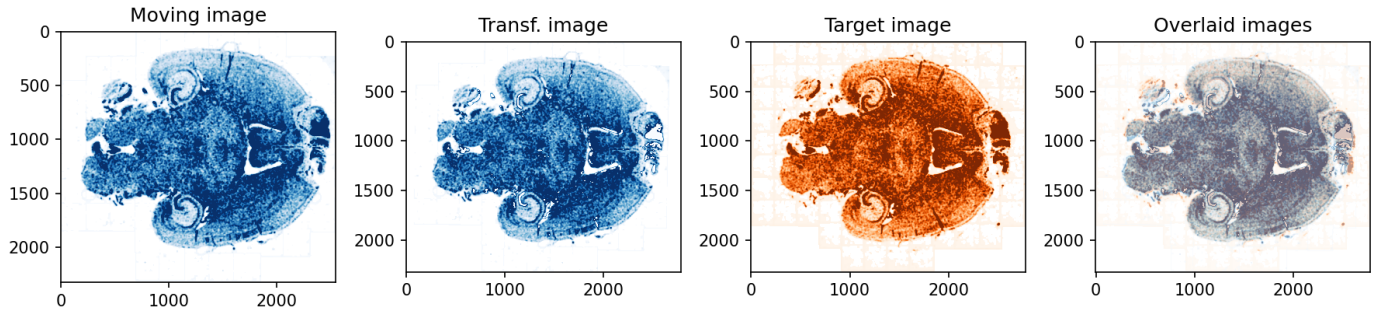


Figure 4.39: Results of registration of image P2-A-C3H-M8\_NOK-0010-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0010-Scene-2 (Target image)

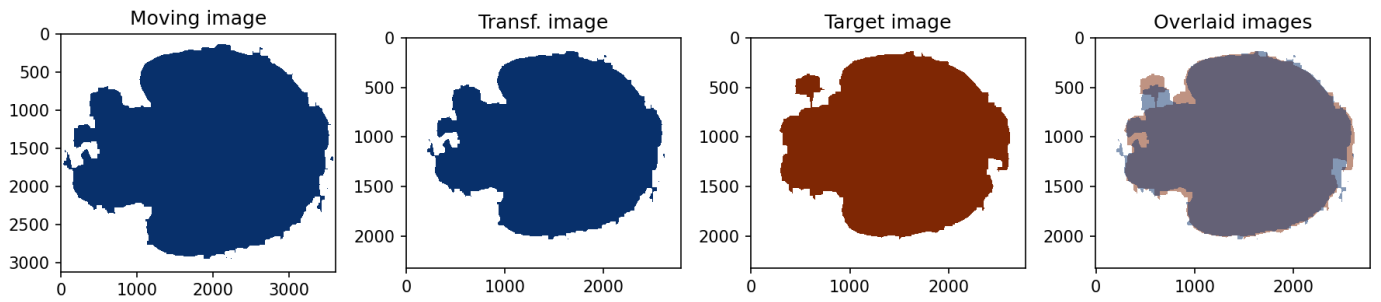


Figure 4.40: Results of registration of image P2A\_C3H\_M8\_HE-0010-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0010-Scene-2 (Target image)

#### 4.1.21 0011\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0011-Scene-1.czi
- P2-A-C3H-M8\_NOK-0011-Scene-1.czi
- P2A\_C3H\_M8\_HE-0011-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

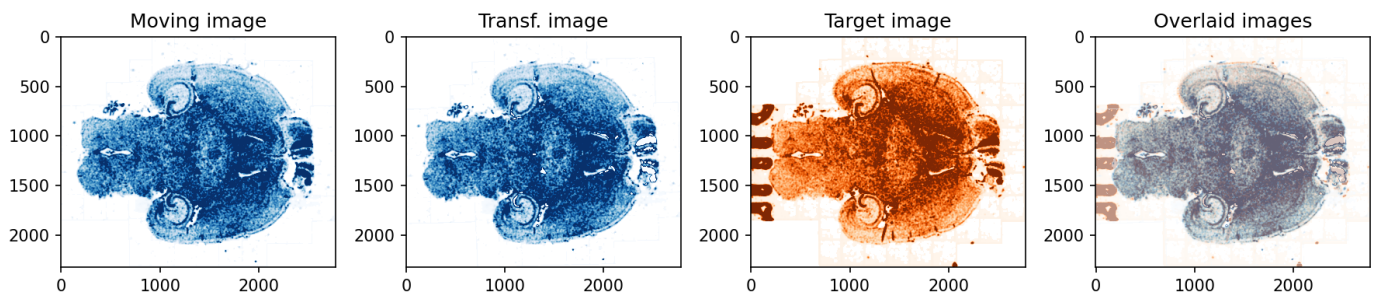


Figure 4.41: Results of registration of image P2-A-C3H-M8\_NOK-0011-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0011-Scene-1 (Target image)

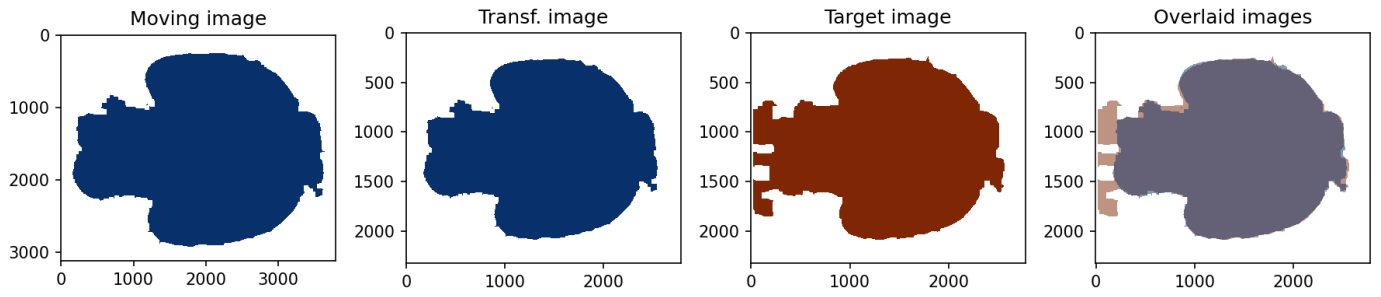


Figure 4.42: Results of registration of image P2A\_C3H\_M8\_HE-0011-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0011-Scene-1 (Target image)

#### 4.1.22 0011\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0011-Scene-2.czi
- P2-A-C3H-M8\_NOK-0011-Scene-2.czi
- P2A\_C3H\_M8\_HE-0011-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

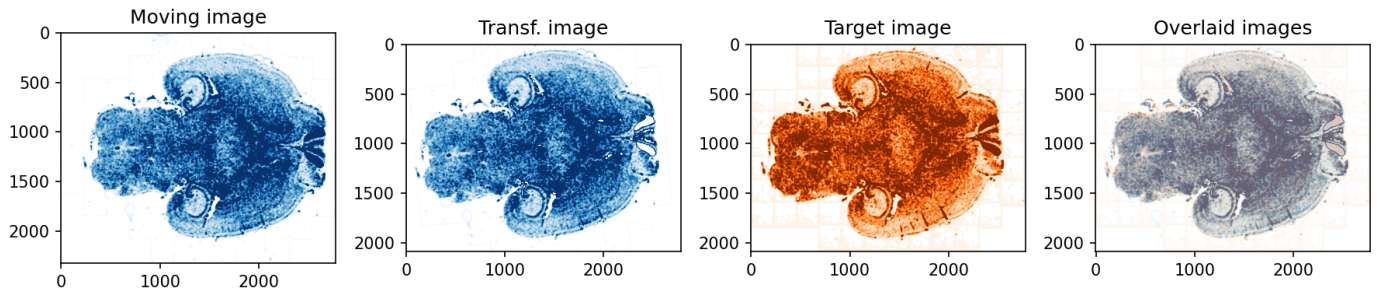


Figure 4.43: Results of registration of image P2-A-C3H-M8\_NOK-0011-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0011-Scene-2 (Target image)

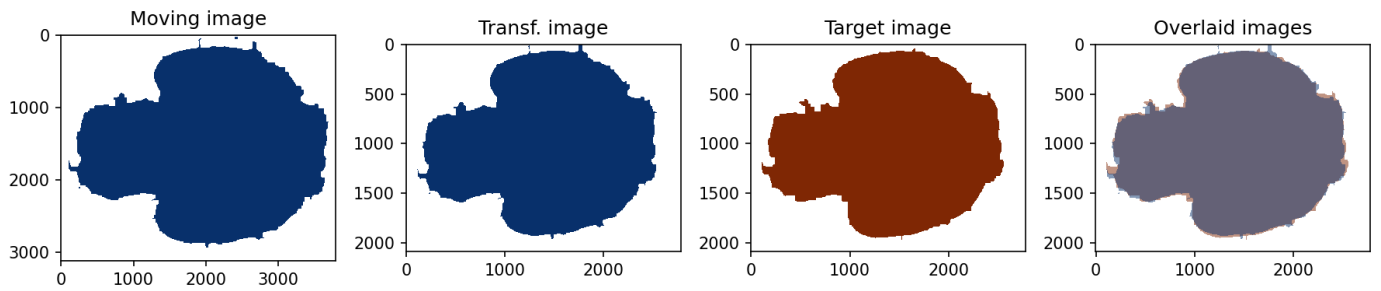


Figure 4.44: Results of registration of image P2A\_C3H\_M8\_HE-0011-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0011-Scene-2 (Target image)

### 4.1.23 0012\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0012-Scene-1.czi
- P2-A-C3H-M8\_NOK-0012-Scene-1.czi
- P2A\_C3H\_M8\_HE-0012-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

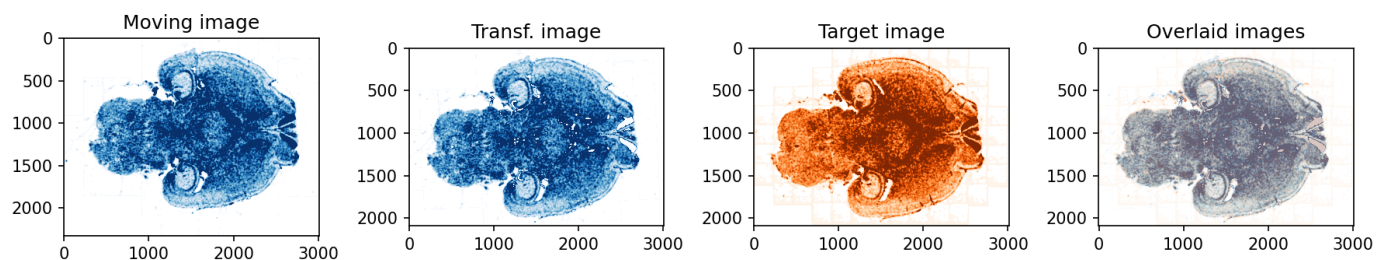


Figure 4.45: Results of registration of image P2-A-C3H-M8\_NOK-0012-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0012-Scene-1 (Target image)

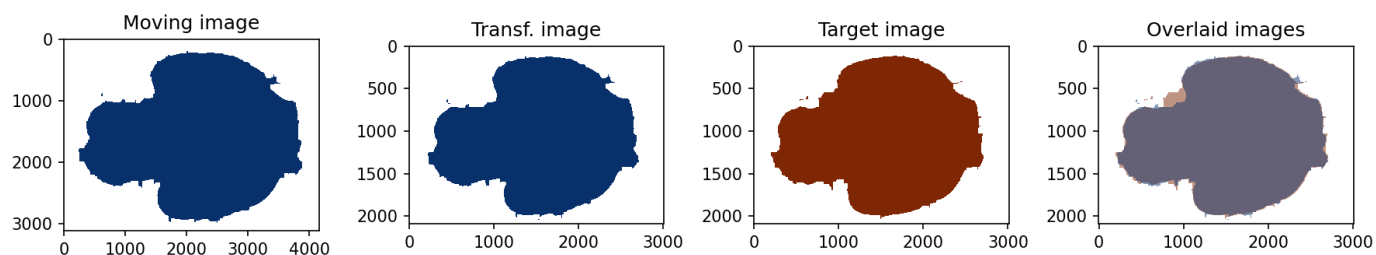


Figure 4.46: Results of registration of image P2A\_C3H\_M8\_HE-0012-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0012-Scene-1 (Target image)

### 4.1.24 0012\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0012-Scene-2.czi
- P2-A-C3H-M8\_NOK-0012-Scene-2.czi
- P2A\_C3H\_M8\_HE-0012-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

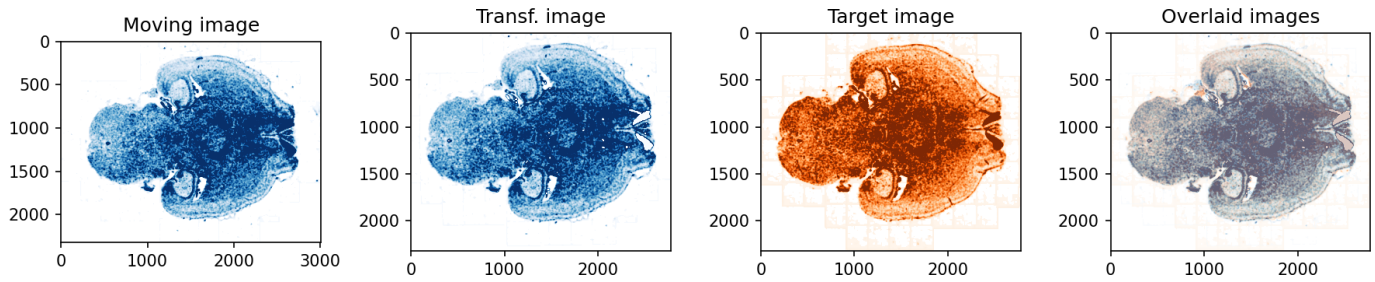


Figure 4.47: Results of registration of image P2-A-C3H-M8\_NOK-0012-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0012-Scene-2 (Target image)

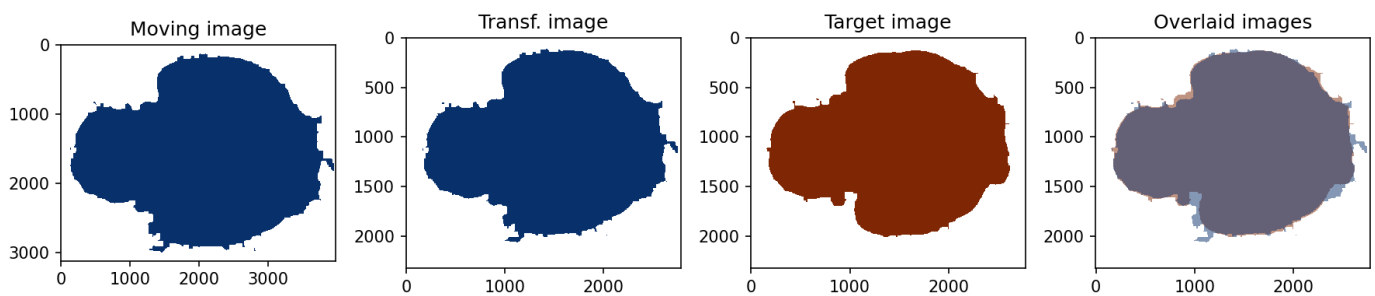


Figure 4.48: Results of registration of image P2A\_C3H\_M8\_HE-0012-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0012-Scene-2 (Target image)

#### 4.1.25 0013\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0013-Scene-1.czi
- P2-A-C3H-M8\_NOK-0013-Scene-1.czi
- P2A\_C3H\_M8\_HE-0013-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

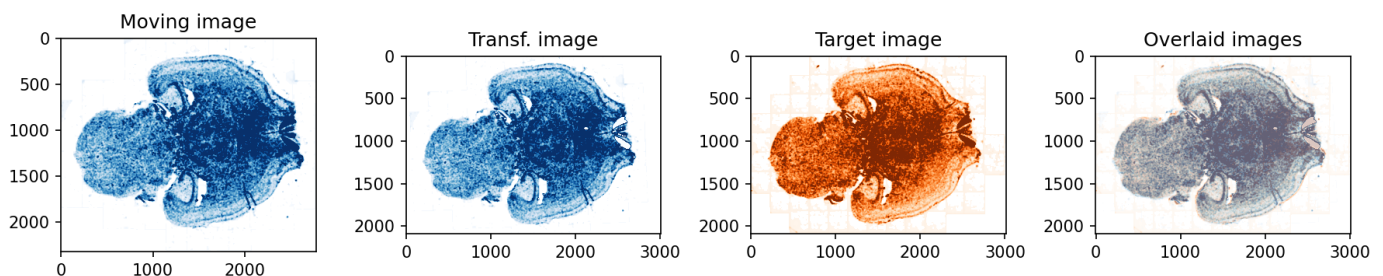


Figure 4.49: Results of registration of image P2-A-C3H-M8\_NOK-0013-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0013-Scene-1 (Target image)

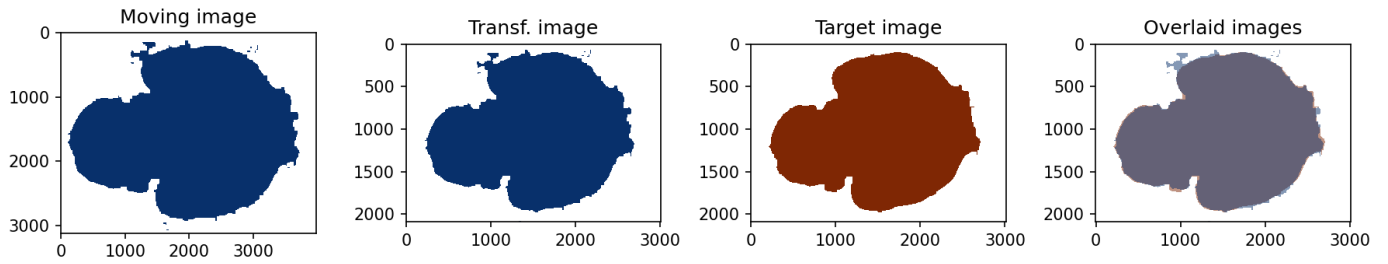


Figure 4.50: Results of registration of image P2A\_C3H\_M8\_HE-0013-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0013-Scene-1 (Target image)

#### 4.1.26 0013\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0013-Scene-2.czi
- P2-A-C3H-M8\_NOK-0013-Scene-2.czi
- P2A\_C3H\_M8\_HE-0013-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

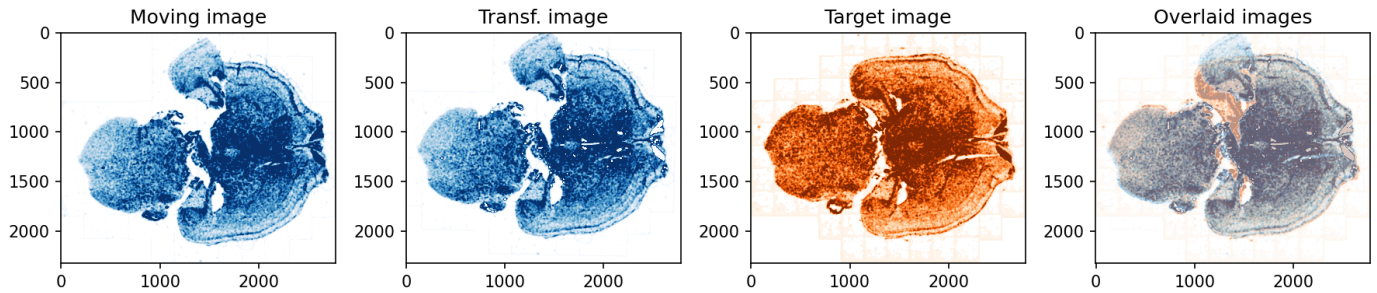


Figure 4.51: Results of registration of image P2-A-C3H-M8\_NOK-0013-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0013-Scene-2 (Target image)

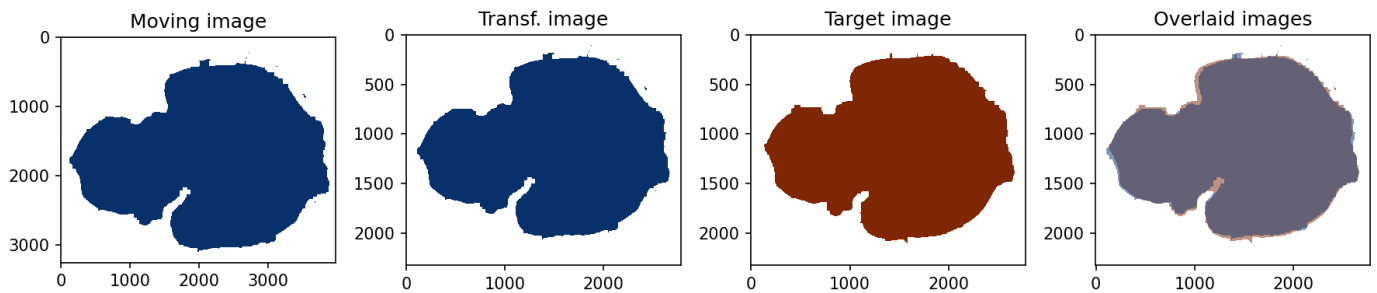


Figure 4.52: Results of registration of image P2A\_C3H\_M8\_HE-0013-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0013-Scene-2 (Target image)

#### 4.1.27 0014\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0014-Scene-1.czi
- P2-A-C3H-M8\_NOK-0014-Scene-1.czi
- P2A\_C3H\_M8\_HE-0014-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

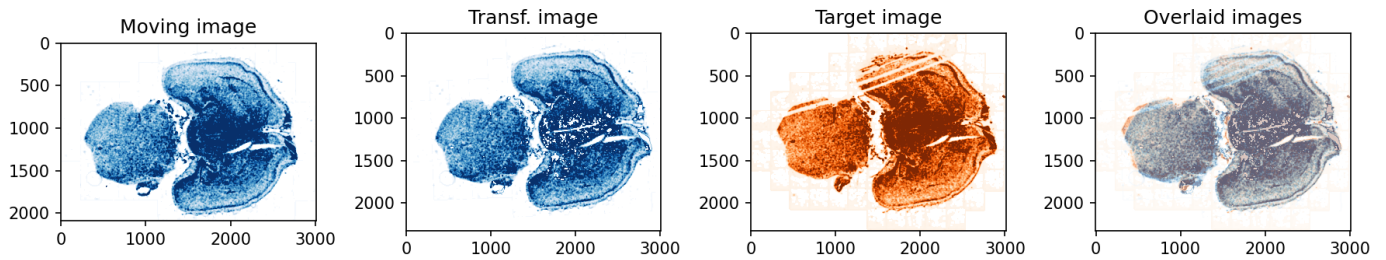


Figure 4.53: Results of registration of image P2-A-C3H-M8\_NOK-0014-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0014-Scene-1 (Target image)

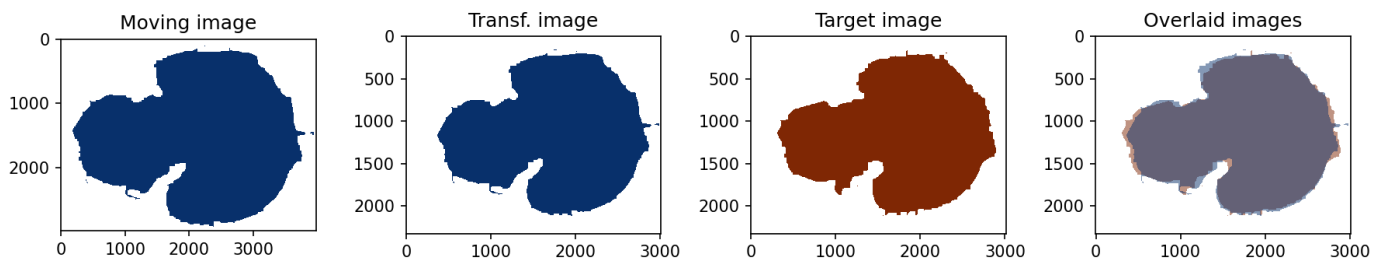


Figure 4.54: Results of registration of image P2A\_C3H\_M8\_HE-0014-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0014-Scene-1 (Target image)

#### 4.1.28 0014\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0014-Scene-2.czi
- P2-A-C3H-M8\_NOK-0014-Scene-2.czi
- P2A\_C3H\_M8\_HE-0014-Scene-2-ScanRegion1.czi

Registered stainings: 3/3

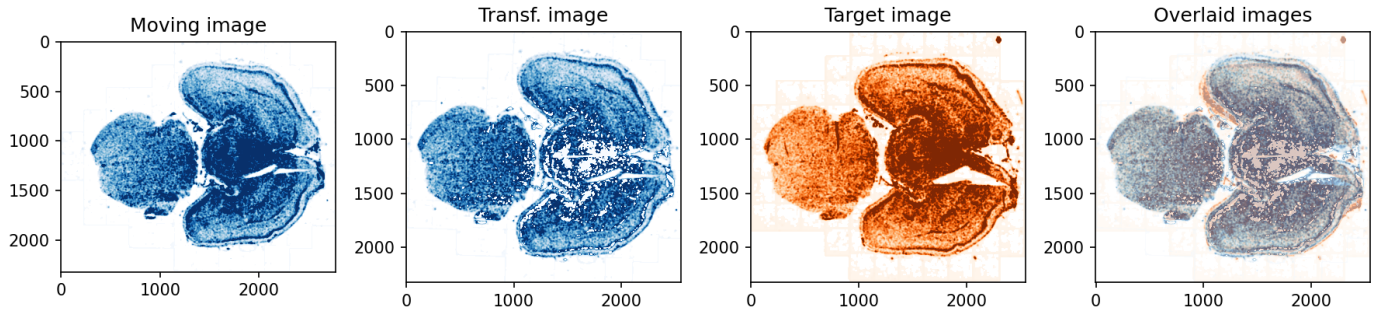


Figure 4.55: Results of registration of image P2-A-C3H-M8\_NOK-0014-Scene-2 (Moving image) to P2-A-C3H-M8\_GNI-0014-Scene-2 (Target image)

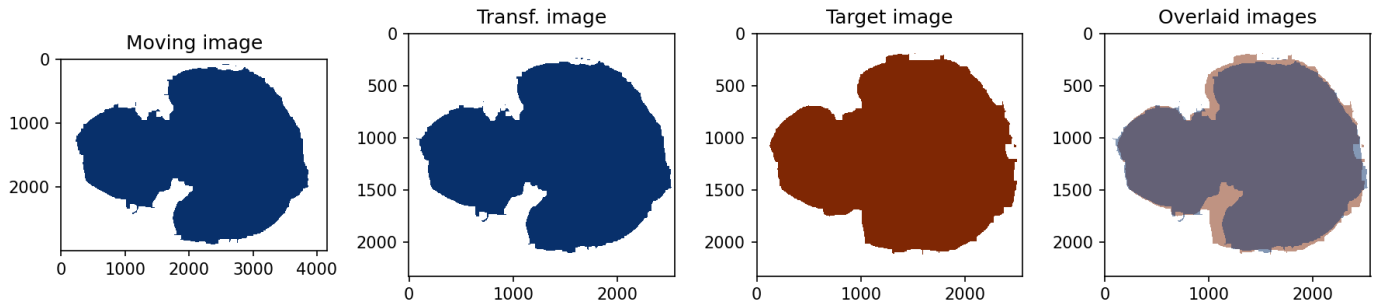


Figure 4.56: Results of registration of image P2A\_C3H\_M8\_HE-0014-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0014-Scene-2 (Target image)

#### 4.1.29 0015\_Scene\_1

Raw images:

- P2-A-C3H-M8\_GNI-0015-Scene-1.czi
- P2-A-C3H-M8\_NOK-0015-Scene-1.czi
- P2A\_C3H\_M8\_HE-0015-Scene-1-ScanRegion0.czi

Registered stainings: 3/3

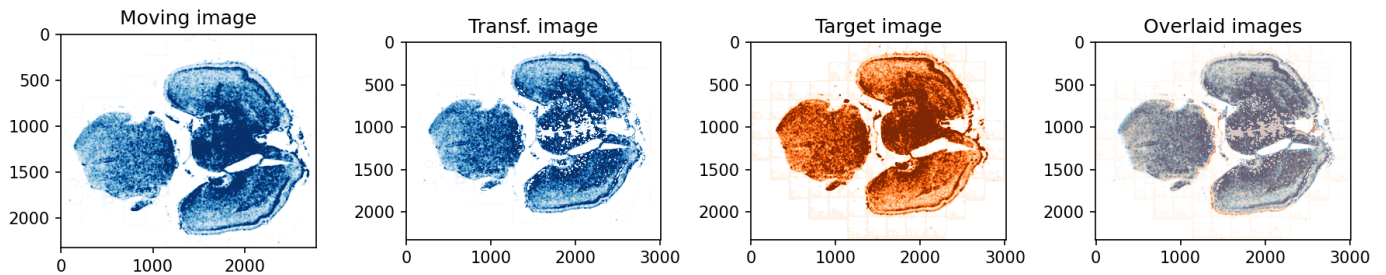


Figure 4.57: Results of registration of image P2-A-C3H-M8\_NOK-0015-Scene-1 (Moving image) to P2-A-C3H-M8\_GNI-0015-Scene-1 (Target image)

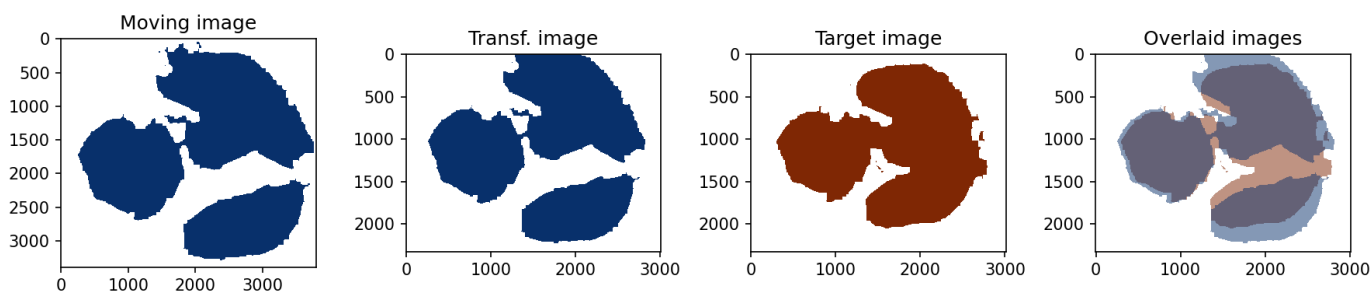


Figure 4.58: Results of registration of image P2A\_C3H\_M8\_HE-0015-Scene-1-ScanRegion0 (Moving image) to P2-A-C3H-M8\_GNI-0015-Scene-1 (Target image)

#### 4.1.30 0015\_Scene\_2

Raw images:

- P2-A-C3H-M8\_GNI-0015-Scene-2.czi
- P2A\_C3H\_M8\_HE-0015-Scene-2-ScanRegion1.czi

Registered stainings: 2/3

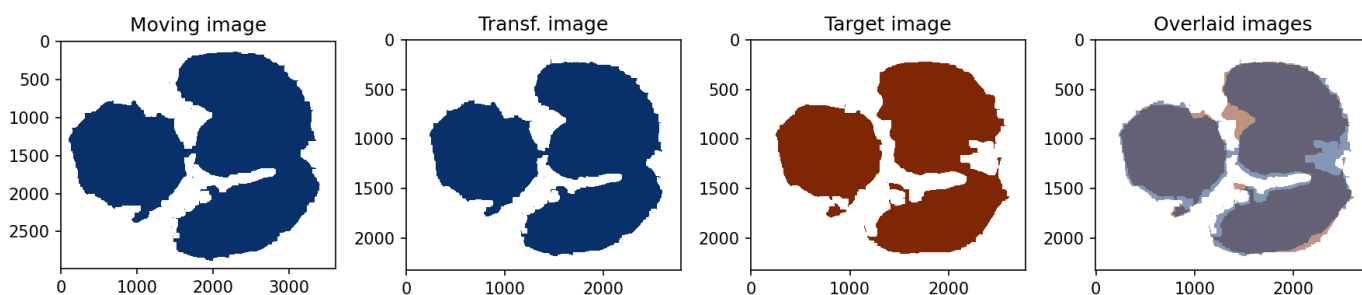


Figure 4.59: Results of registration of image P2A\_C3H\_M8\_HE-0015-Scene-2-ScanRegion1 (Moving image) to P2-A-C3H-M8\_GNI-0015-Scene-2 (Target image)

## 4.2 Slice2Volume

Forward transformation files: 29/30

Inverse transformation files: 29/30



Figure 4.60: Sequence of coronal DAPI images that were transformed with Slice2Volume. This view allows to evaluate the consistency of subsequent slices.

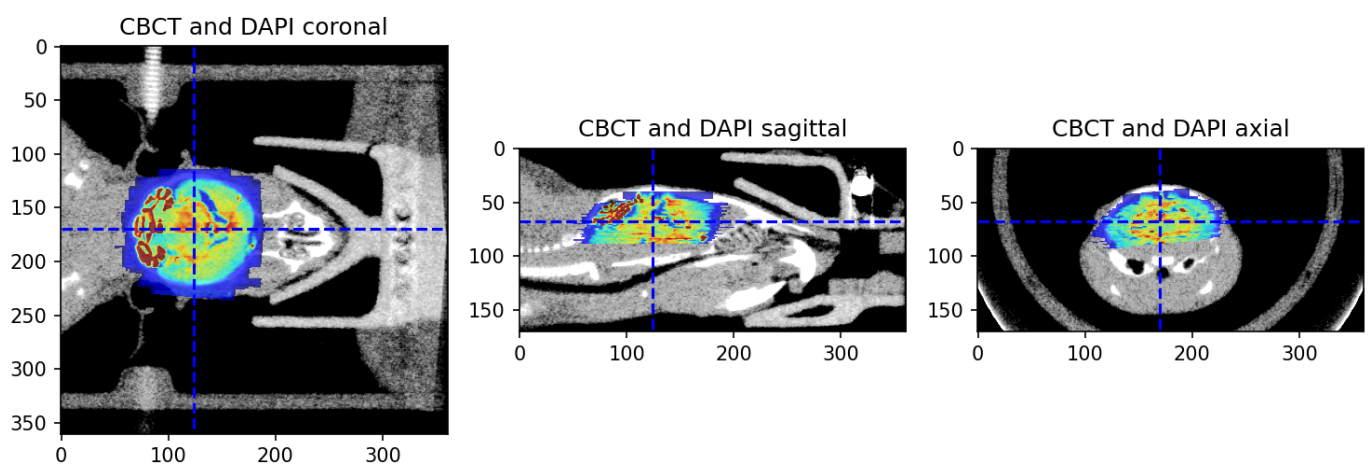


Figure 4.61: Overlay of downsampled and transformed histological image (transformed\_DAPI) and CBCT