

# Segmentation Workflow MS / Social Cognition



→ Acknowledgement list:

- A. Zaitsev
- A. Mike
- K. Pohl
- A. Kucsai
- A. Fedorov
- C. Guttman
- S. Pieper
- R. Kikinis

3/31/10

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# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine

Segmentation Workbench ("Pesc Scenario")

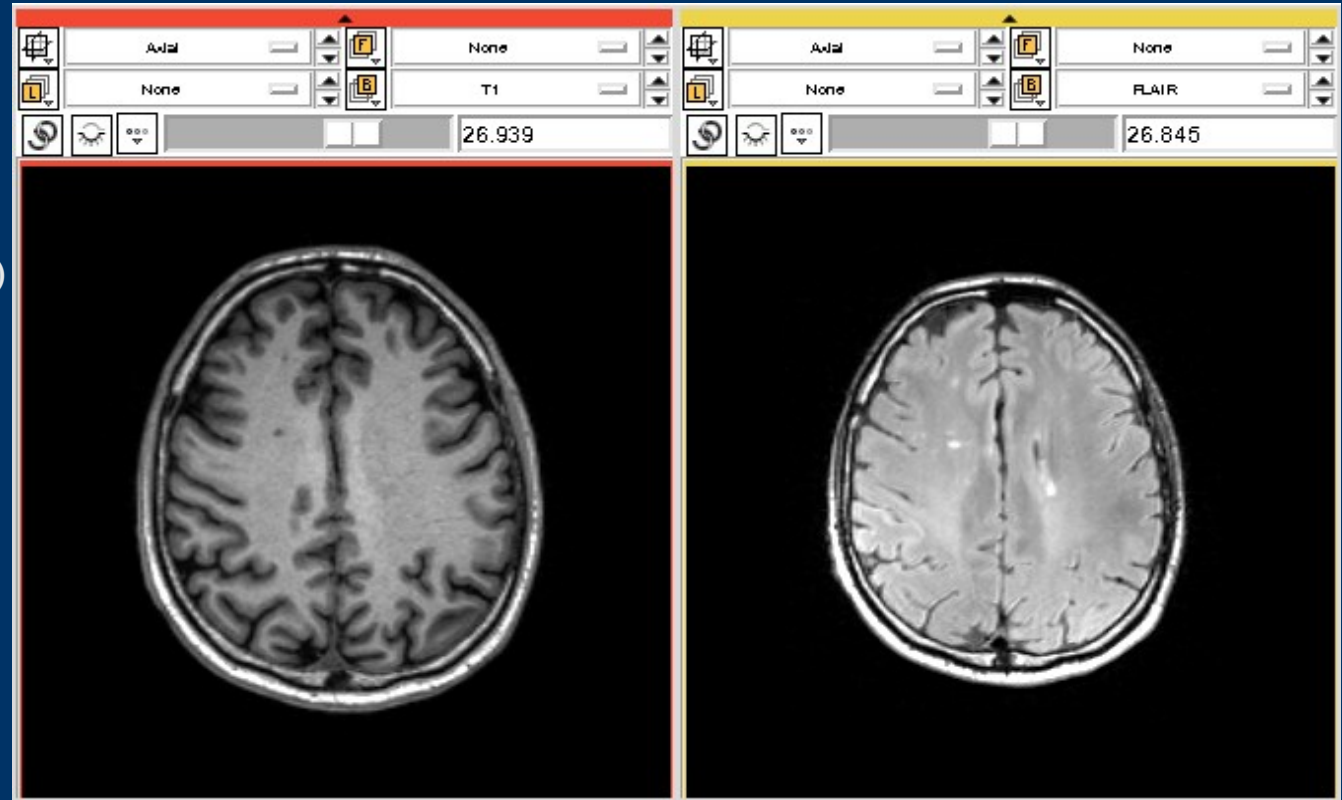
Completed      Number of Cases    27

Project	Hospital	Subject	IccExtracted	IccCorrected	EMSeg_Preproce...	WM-GM-CSF_EM...	DeepGMSegmen...	Lesions	Completed
social	cni	S010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S013	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S016	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S017	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S019	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Segmentation Workflow MS / Social Cognition



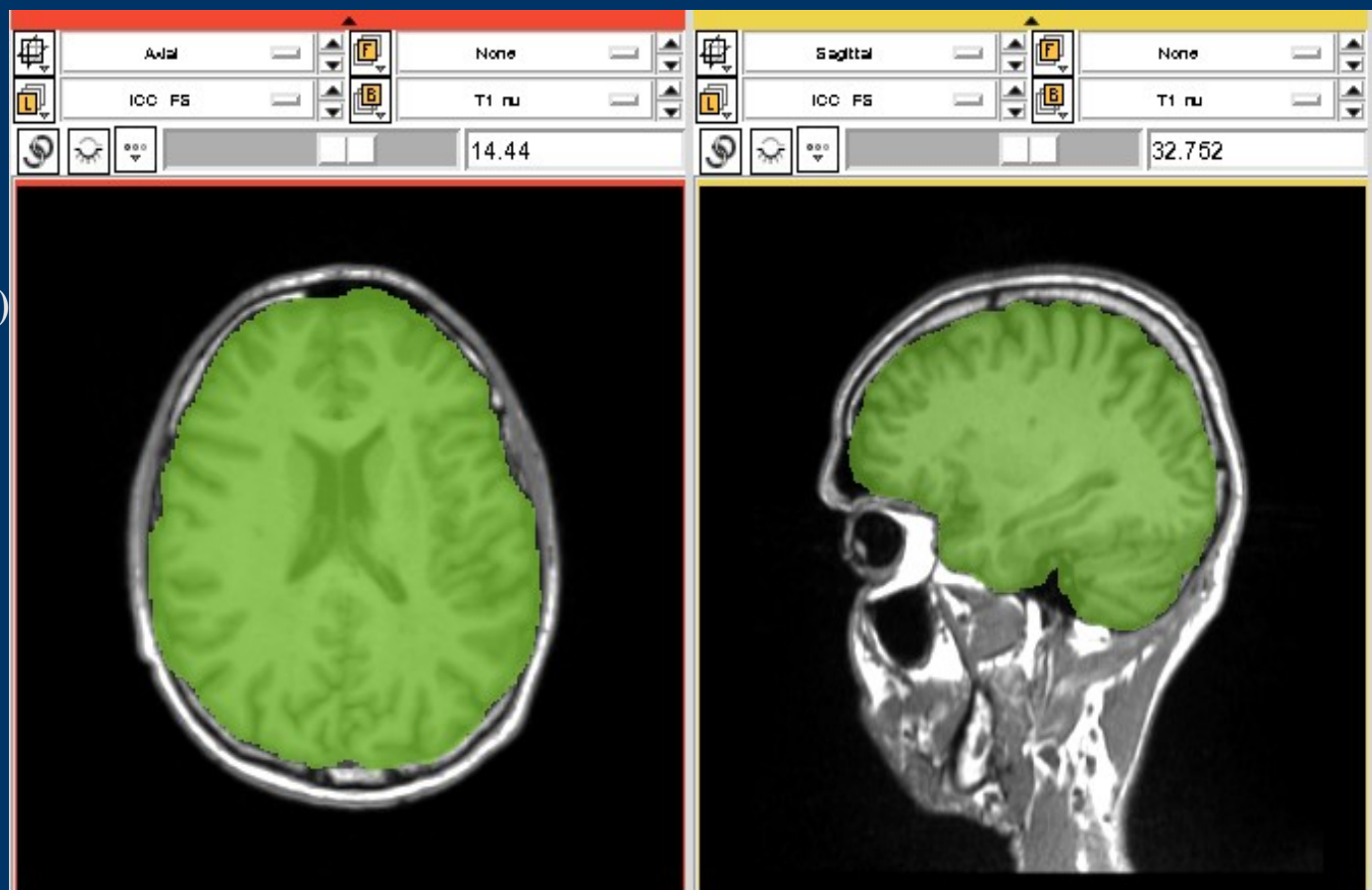
- **Get T1/FLAIR**
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



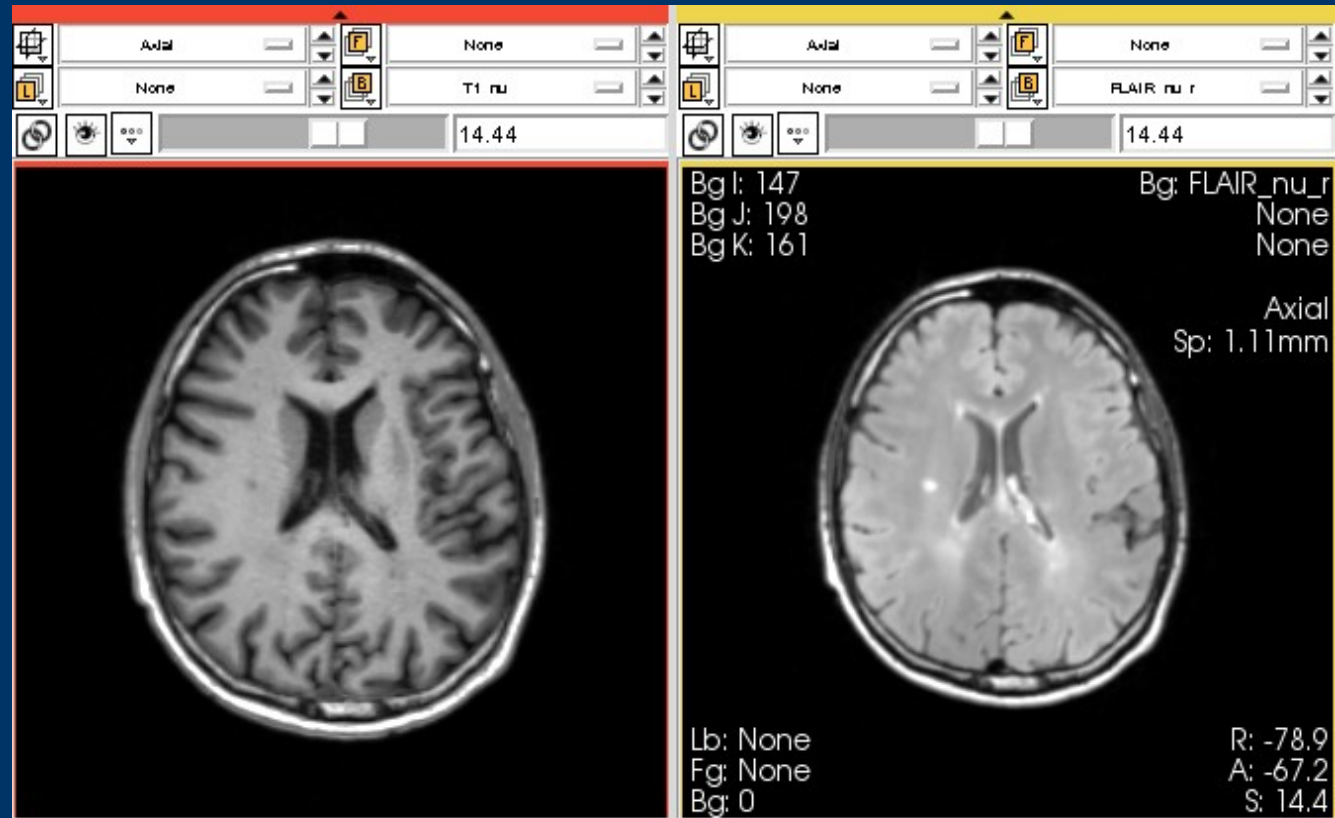
- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



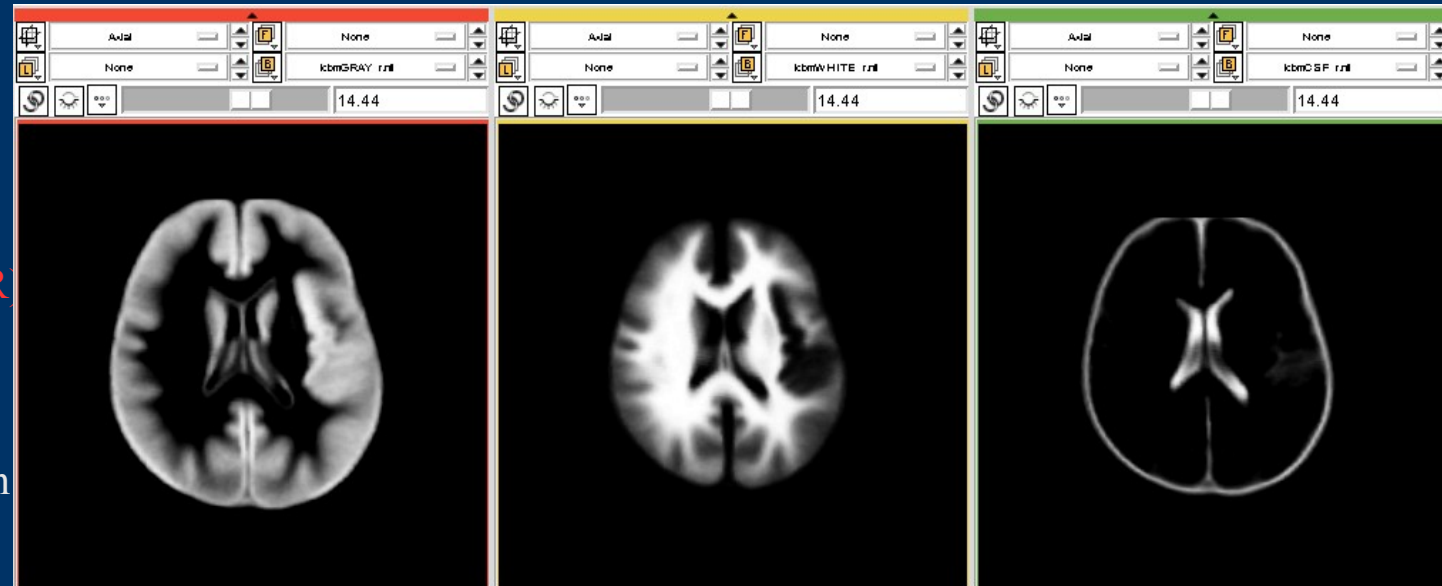
- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



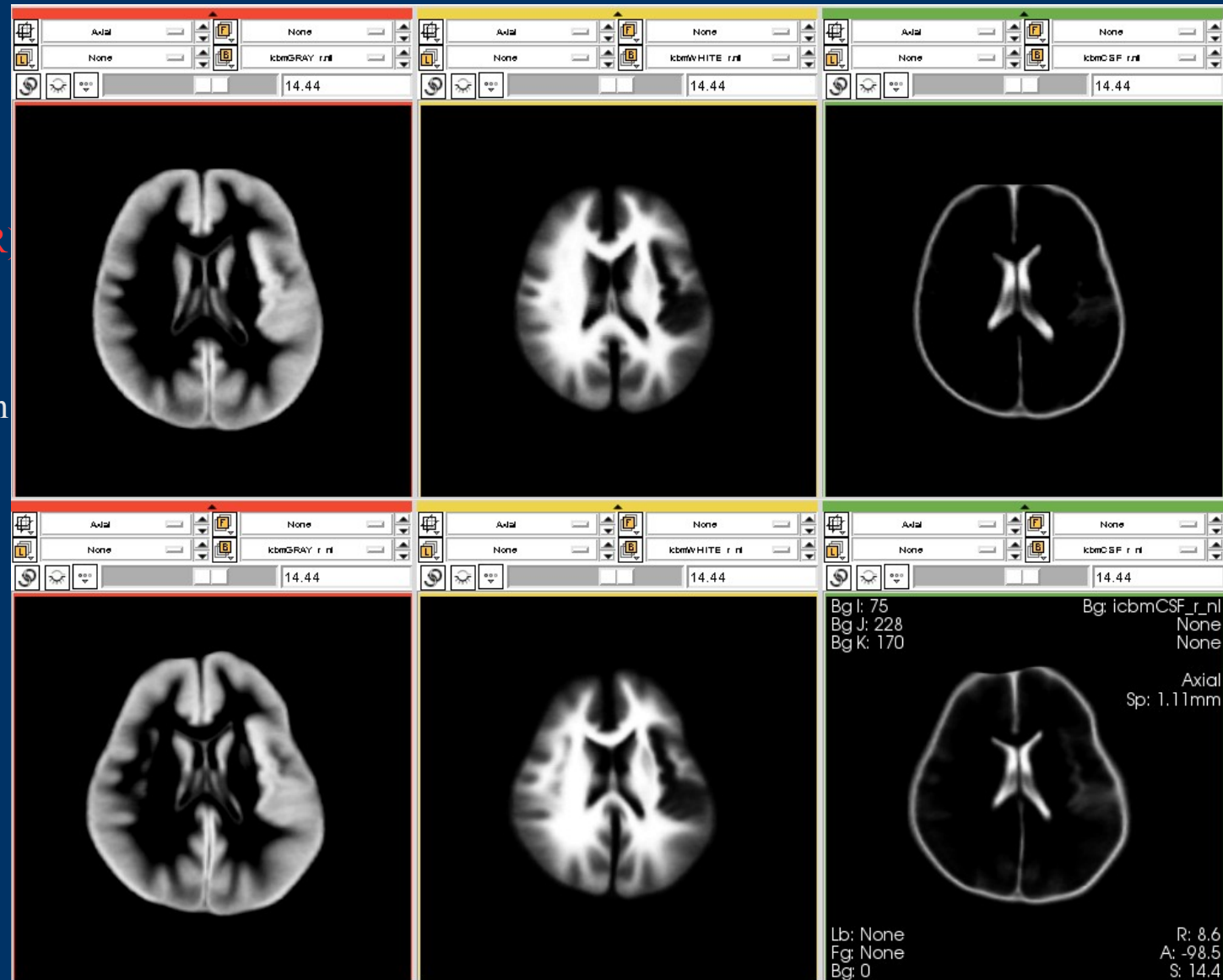
- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine

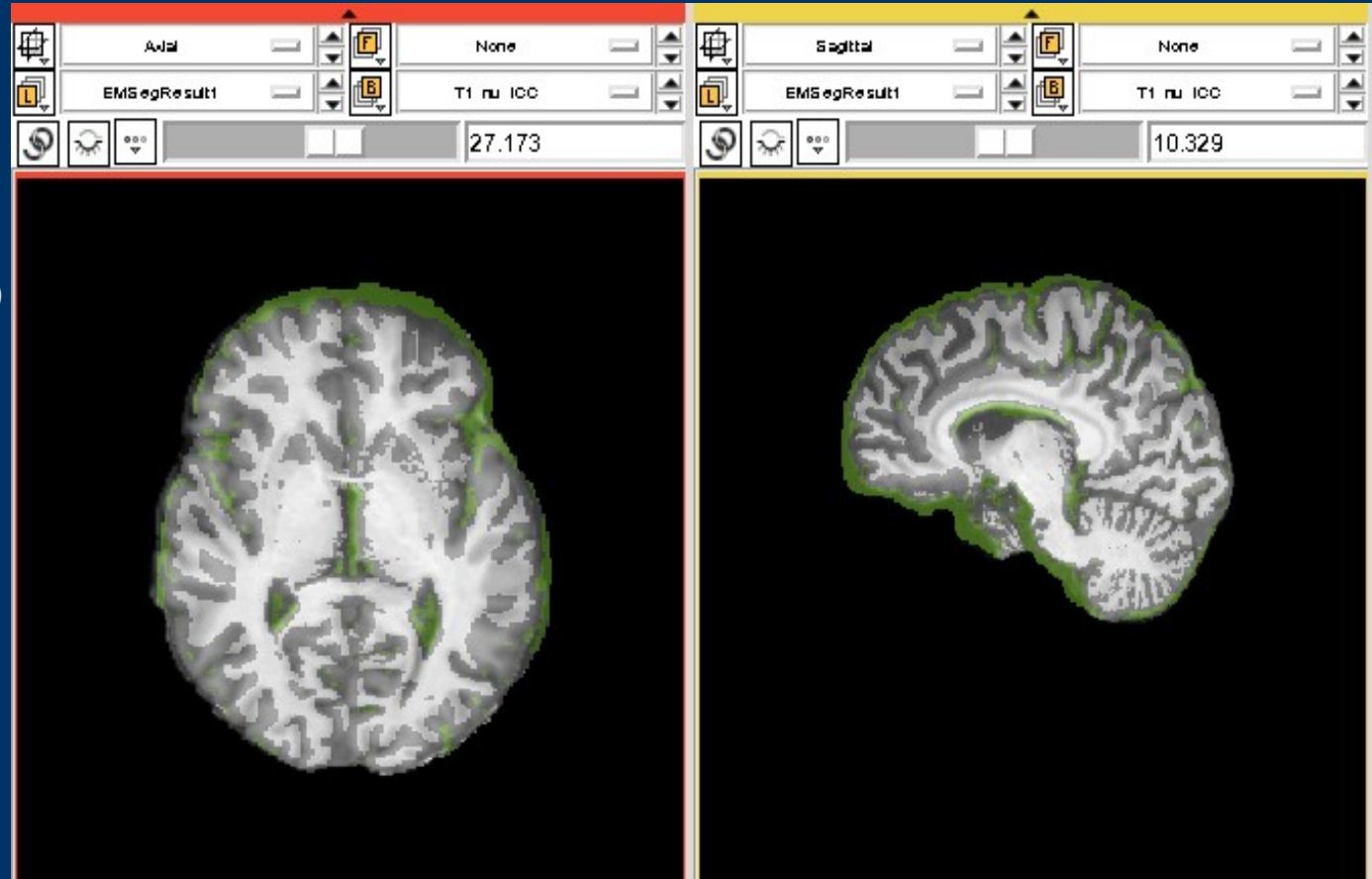




# Segmentation Workflow MS / Social Cognition



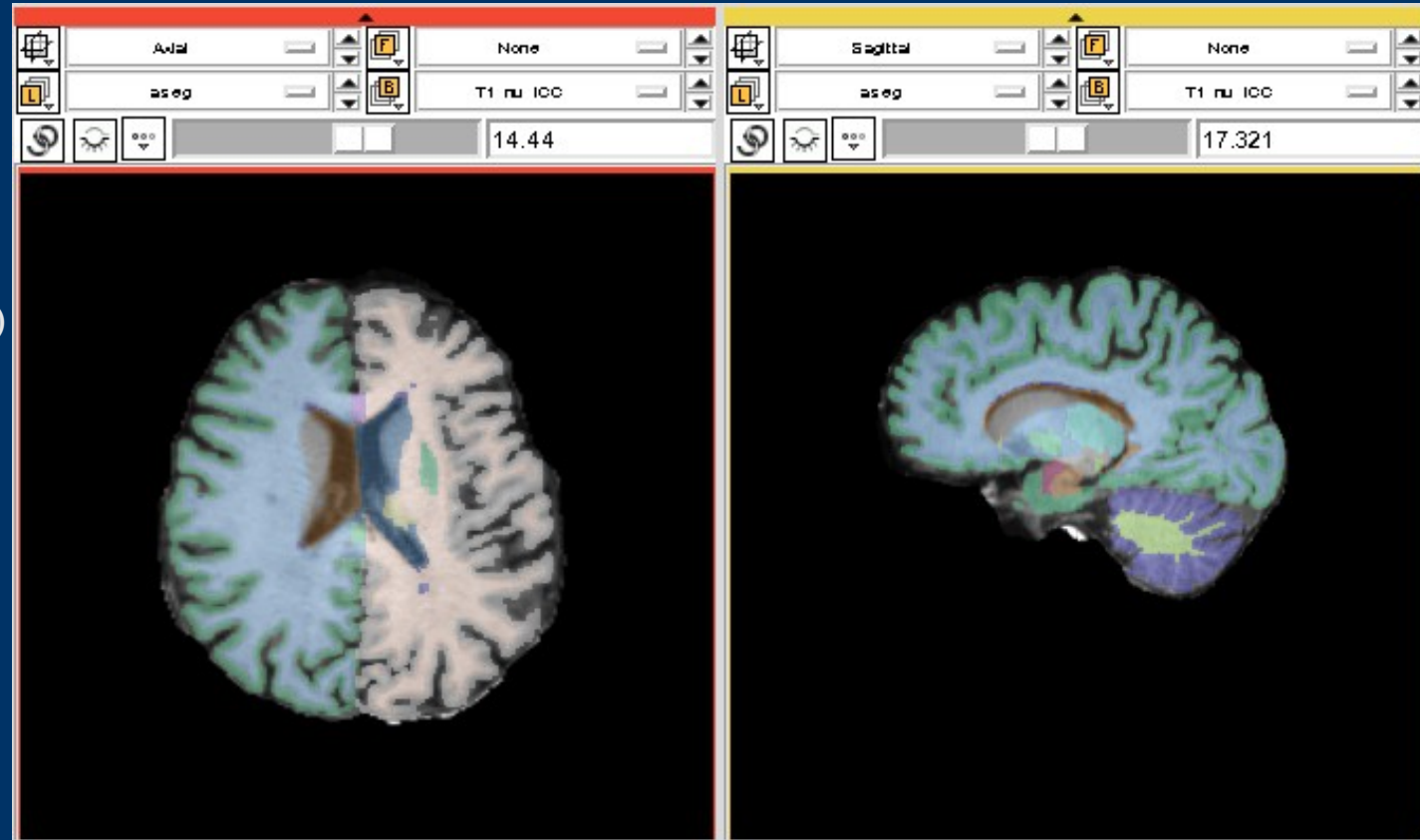
- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- **WM/GM/CSF EM Segmentation**
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- **Deep GM Segmentation**
- Lesion Segmentation
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preproc
  - Noise Reduction
  - FLAIR to T1 Re
  - Skull Stripping (
  - ICBM Atlases R
    - Linear
    - Non Linear
- WM/GM/CSF EM Se
- Deep GM Segmentati
- **Lesion Segmentation**
- Label Maps Combine

Segmentation Workbench ("Pesc Scenario")

Completed      Number of Cases    27

Project	Hospital	Subject	IccExtracted	IccCorrected	EMSeg_Preproce...	WM-GM-CSF_EM...	DeepGMSegmen...	Lesions	Completed
social	cni	S010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S013	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S016	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S017	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S019	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S020	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S021	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S022	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Root Result Folder

/cniNew/SPINE/Projects/Social/S010     

Project:       Hospital:       SubjectID:       User:

EM Segmentation Volume

Lesions Segmentation Volume

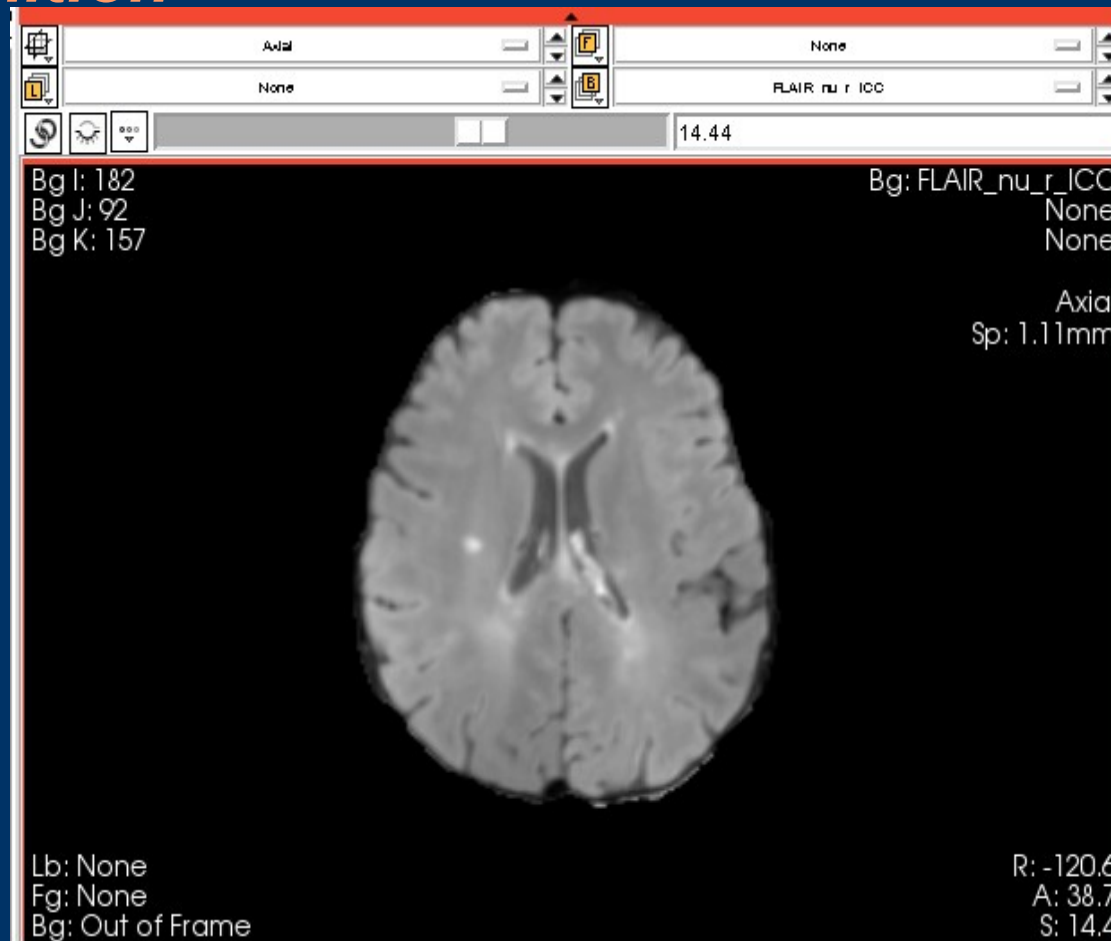
     \*!!!\*     

ASEG Segmentation Volume

# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- **Lesion Segmentation**
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- **Lesion Segmentation**
- Label Maps Combine



# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Registration
  - Skull Stripping (T1, FLAIR)
  - ICBM Atlases Registration
    - Linear
    - Non Linear
- WM/GM/CSF EM Segmentation
- Deep GM Segmentation
- **Lesion Segmentation**
- Label Maps Combine

Segmentation Workbench ("Pesc Scenario")

Completed      Number of Cases    27

Project	Hospital	Subject	IccExtracted	IccCorrected	EMSeg_Preproc...	WM-GM-CSF_EM...	DeepGMSegmen...	Lesions	Completed
social	cni	S010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S013	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S016	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S017	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S019	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S020	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S021	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S022	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Root Result Folder  
/cniNew/SPINE/Projects/Social/S010     

Project: social      Hospital: cni      SubjectID: S010      User: admin

EM Segmentation Volume  
/cniNew/SPINE/Projects/Social/S010/EMSegResult1.nii

Lesions Segmentation Volume  
/cniNew/SPINE/Projects/Social/S010/Lesions.nii

ASEG Segmentation Volume  
/cniNew/SPINE/Projects/Social/S010/aseg.nii

Review Message

Lesion Segmentation Completed

# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocess
  - Noise Reduction
  - FLAIR to T1 Regis
  - Scull Stripping (T1)
  - ICBM Atlases Regi
    - Linear
    - Non Linear
- WM/GM/CSF EM Segm
- Deep GM Segmentation
- **Lesion Segmentation**
- Label Maps Combine

**Segmentation Workbench ("Pesc Scenario")**

Completed      Number of Cases    27

Project	Hospital	Subject	IccExtracted	IccCorrected	EMSeg_Preproce...	WM-GM-CSF_EM...	DeepGMSegmen...	Lesions	Completed
social	cni	S010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S013	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S016	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S017	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S019	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S020	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S021	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S022	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Root Result Folder**

/cniNew/SPINE/Projects/Social/S010 Select

Project: social    Hospital: cni    SubjectID: S010    User: admin

EM Segmentation Volume: /cniNew/SPINE/Projects/Social/S010/EMSegResult1.nii Review

Lesions Segmentation Volume: /cniNew/SPINE/Projects/Social/S010/Lesions.nii Segment / Review

ASEG Segmentation Volume: /cniNew/SPINE/Projects/Social/S010/aseg.nii

Verify Inputs    Submit

# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocess
  - Noise Reduction
  - FLAIR to T1 Regis
  - Skull Stripping (T1)
  - ICBM Atlases Regi
    - Linear
    - Non Linear
- WM/GM/CSF EM Segm
- Deep GM Segmentation
- Lesion Segmentation
- **Label Maps Combine**

Segmentation Workbench ("Pesc Scenario")

Completed      Number of Cases    27

Project	Hospital	Subject	IccExtracted	IccCorrected	EMSeg_Preproce...	WM-GM-CSF_EM...	DeepGMSegmen...	Lesions	Completed
social	cni	S010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S013	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S016	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S017	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S019	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S020	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S021	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
social	cni	S022	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Root Result Folder  
/cniNew/SPINE/Projects/Social/S010     

Project: social      Hospital: cni      SubjectID: S010      User: admin

EM Segmentation Volume  
/cniNew/SPINE/Projects/Social/S010/EMSegResult1.nii     

Lesions Segmentation Volume  
/cniNew/SPINE/Projects/Social/S010/Lesions.nii

ASEG Segmentation Volume  
/cniNew/SPINE/Projects/Social/S010/aseg.nii

Message

összes jól!!!!  
várjon 10 másodpercig...



# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preproc
  - Noise Reduction
  - FLAIR to T1 Re
  - Skull Stripping (
  - ICBM Atlases R
    - Linear
    - Non Linear
- WM/GM/CSF EM Se
- Deep GM Segmentati
- Lesion Segmentation
- Label Maps Combine

**Segmentation Workbench ("Pesc Scenario")**

Completed      Number of Cases    15

Project	Hospital	Subject	IccExtracted	IccCorrected	EMSeg_Preproce...	WM-GM-CSF_EM...	DeepGMSegmen...	Lesions	Completed
social	cni	S010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S025	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S026	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S027	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S028	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S029	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S030	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S031	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S032	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S033	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S034	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S035	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S036	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Root Result Folder**

/cniNew/SPINE/Projects/Social/S010     

Project:     Hospital:     SubjectID:     User:

**EM Segmentation Volume**

/cniNew/SPINE/Projects/Social/S010/EMSegResult1.nii     

**Lesions Segmentation Volume**

/cniNew/SPINE/Projects/Social/S010/Lesions.nii     

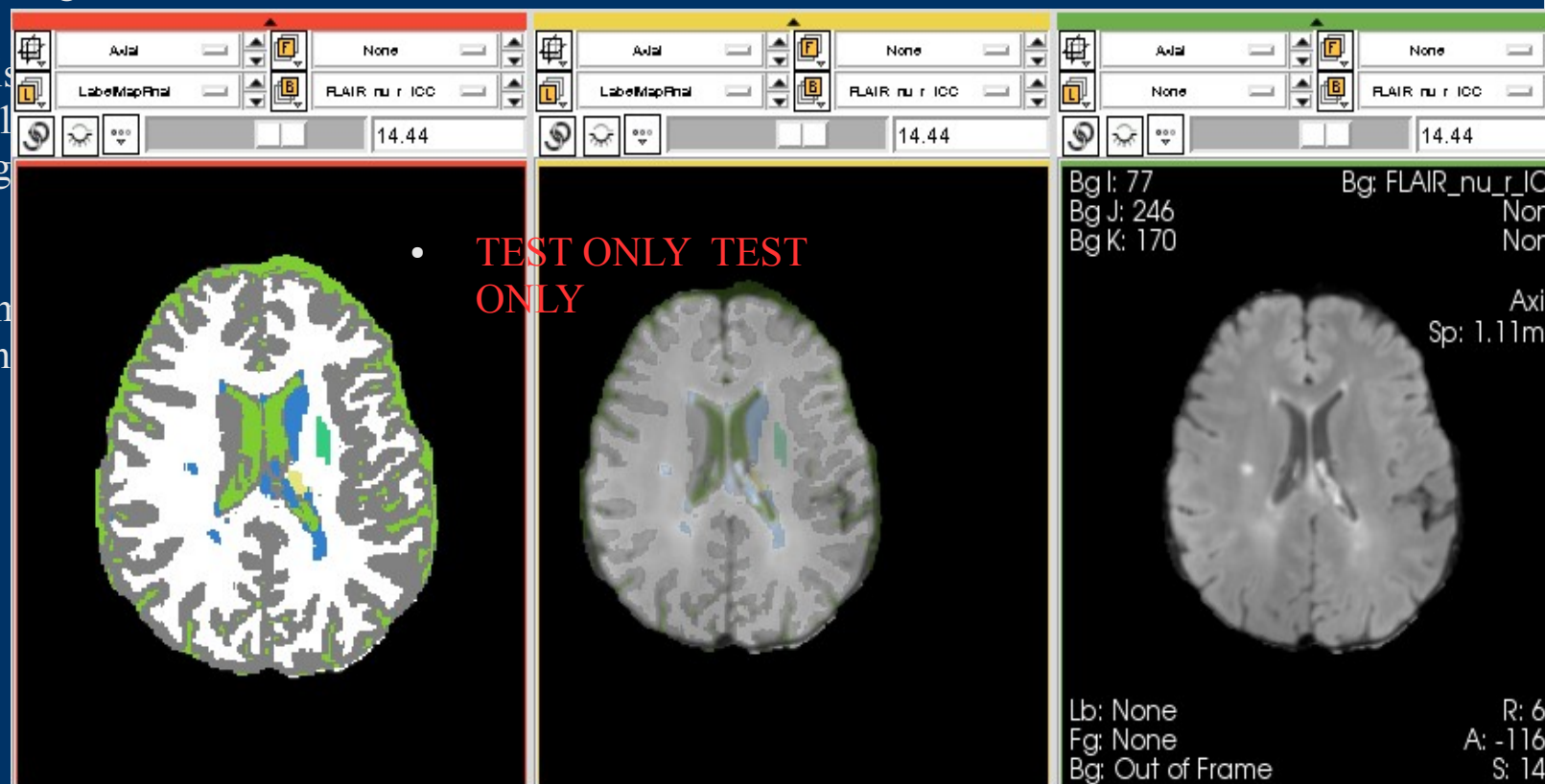
**ASEG Segmentation Volume**

/cniNew/SPINE/Projects/Social/S010/aseg.nii

# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocessing
  - Noise Reduction
  - FLAIR to T1 Regis
  - Skull Stripping (T1)
  - ICBM Atlases Reg
    - Linear
    - Non Linear
- WM/GM/CSF EM Segn
- Deep GM Segmentation
- Lesion Segmentation
- **Label Maps Combine**



• TEST ONLY TEST ONLY

Bg I: 77  
Bg J: 246  
Bg K: 170  
Bg: FLAIR\_nu\_r\_ICC  
Non  
Non  
Axi  
Sp: 1.11m  
Lb: None  
Fg: None  
Bg: Out of Frame  
R: 6  
A: -116  
S: 14

# Segmentation Workflow MS / Social Cognition



- Get T1/FLAIR
- ICC Mask Extract
- Segmentation Preprocess
  - Noise Reduction
  - FLAIR to T1 Regis
  - Skull Stripping (T1)
  - ICBM Atlases Reg
    - Linear
    - Non Linear
- WM/GM/CSF EM Segm
- Deep GM Segmentation
- Lesion Segmentation
- Label Maps Combine

**Segmentation Workbench ("Pesc Scenario")**

Completed      Number of Cases    15

Project	Hospital	Subject	IccExtracted	IccCorrected	EMSeg_Preproce...	WM-GM-CSF_EM...	DeepGMSegmen...	Lesions	Completed
social	cni	S010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S025	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S026	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S027	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S028	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S029	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S030	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S031	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S032	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S033	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S034	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S035	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
social	cni	S036	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Root Result Folder**

/cniNew/SPINE/Projects/Social/S025     

Project:     Hospital:     SubjectID:     User:

EM Segmentation Volume:      

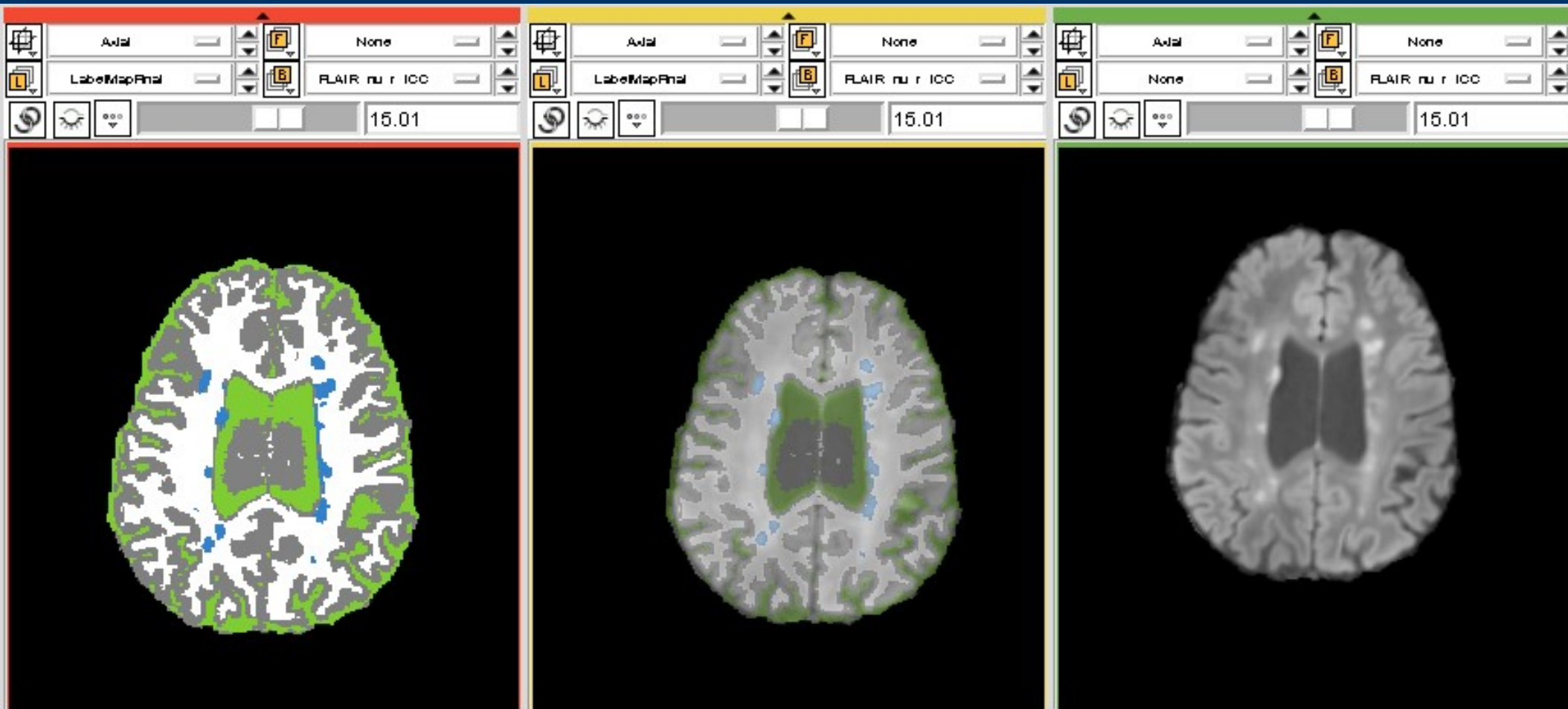
Lesions Segmentation Volume:      

ASEG Segmentation Volume:

# Segmentation Workflow MS / Social Cognition

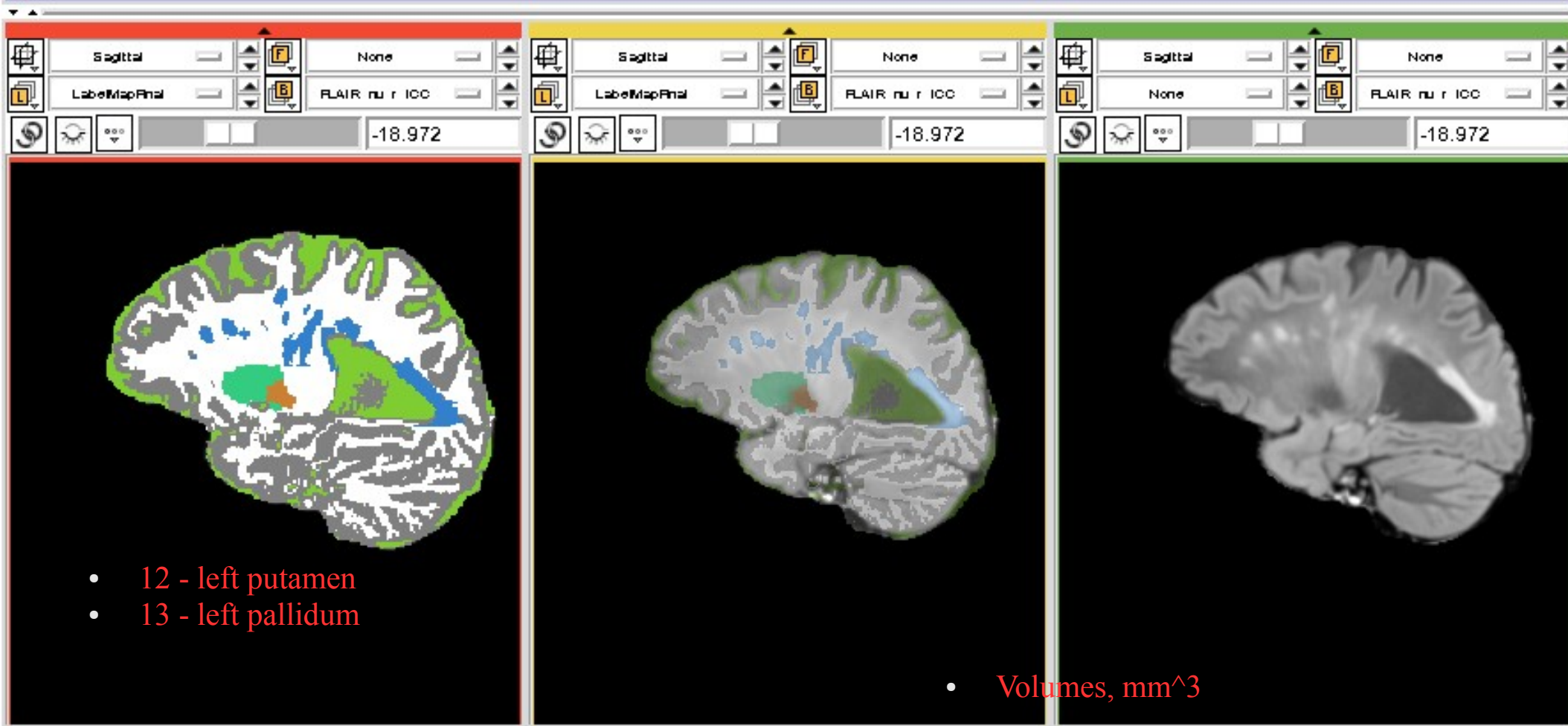


Center for  
Neurological  
Imaging



- Lesion Segmentation
- Label Maps Combine

# Segmentation Workflow MS / Social Cognition



- 12 - left putamen
- 13 - left pallidum

• Volumes, mm<sup>3</sup>

- Lesion Segmentation
- Label Maps Combine

- 1 - Lesions
- 3 - WM
- 16 - CSF
- 20 - GM

1	16404	19684.800782
3	475612	570734.422679
16	226044	271252.810779
20	655483	786579.631256