

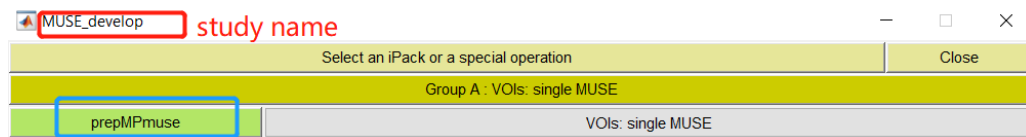
HOW TO USE IDAE WITH MUSE

This is the supplementary instruction for the users who would like to use IDAE with MUSE ([MULTi-atlas region Segmentation utilizing Ensembles of registration algorithms and parameters, and locally optimal atlas selection](#)) for MR brain segmentation.

In this instruction, we assume that the user has already finished the installation of IDAE, which means now you have constructed the environment in your local adaptor and scanDB files. If not, please refer to IDAE_Manual.pdf.

The basic pipeline for processing and analysis of the MUSE version is largely the same as the one of FreeSurfer(FS) version, but with some differences in VOI settings. Before checking them out, please keep one point in mind first:

- a. It is suggested that the subjects are separately stored in different folders for MUSE version and FreeSurfer version, which is for avoiding confusion between FS and MUSE outputs. If we want to process the same subject simultaneously by FS and MUSE, copy it once and assign a different folder name.
- b. It is suggested that we create a new study containing the subjects waiting to be processed by MUSE. Then, copy the two configuration files from the distribution set `/iv2_MUSE/muse_prep_config/` to your user's folder like `/user_folder/idae/study_name/iv2`. When login in to IDAE with your user name and local adaptor, we can see the starting package prepMPmuse:

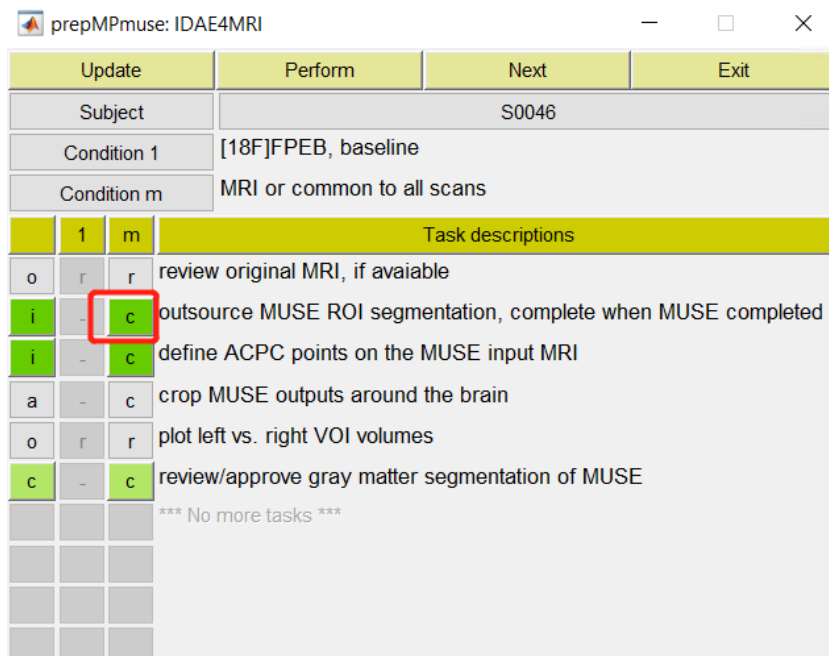


In prepMPmuse, the 1st stage package.

First, to use the MUSE version, we need an input file ****muse_input.nii**, which is the input MRI file for MUSE. After finishing the ROI segmentation in MUSE, we get the

output ROI masks file and rename it as ****muse_output.nii**.

Put these two files in the MR folder of this subject, then, in IDAE4MRI, you will see the ‘p’ flag for **‘outsource MUSE ROI segmentation, complete when MUSE completed’**. Click it and update, the flag will become ‘c’. Do the successive steps just like for the FS version, the final stage of IDAE4MRI will look like this:



Then, as for MUSE, we only have one set of VOIs called ‘MUSE’, while FreeSurfer is with two sets FS81 and FS45. In IDAE4VOIs, do the same things we do in IDAE with FS, but only for set ‘MUSE’. And still, choose the occipital lobe as the reference region.

IDAE4PET has no differences from the FS version.

In TAC2MPE_prepMPmuse, the 2nd stage package.

IDAE4HMC, IDAE4TACs, IDAE4SN, IDAE4PIMs, and IDAE4RTMs have no differences from the FS version.

But, at the start, when setting the VOIs for the second stage package, please remove the ventricles. And if any function is reported with errors, please check if this function in \iv2_muse is different from the one with the same name in \iv2. If they are different, replace the one in \iv2_muse with one in \iv2.

Hit this GUI to start over			
Regions	MUSE		
amygdala		middle occipital lobe	
angular gyrus		middle temporal lobe	
anterior cingulate		occipital lobe	R
basal forebrain		orbital gyrus	
brainstem		parahippocampus	
calcarine cortex		pars triangularis	S
caudal middle frontal		planum polare	
caudate nucleus		planum temporale	
central operculum		postcentral gyrus	
cerebellar WM		posterior cingulate	S
cerebellum		posterior orbital gyrus	
cerebral exterior		precentral gyrus	
cuneus		precuneus	
entorhinal area		putamen	
frontal operculum		rectal gyrus	
frontal pole		subcallosal area	
fronto-orbital		superior frontal lobe	
fusiform gyrus		superior occipital lobe	
globus pallidus		superior parietal lobe	
hippocampus		superior temporal lobe	
inferior frontal operculum		supramarginal	
inferior occipital lobe		temporal pole	
inferior temporal lobe		thalamus	
insula		transverse temporal	
lateral orbital gyrus		ventral striatum	
lingual gyrus		ventricles	S
medial frontal lobe		white matter	
medial orbital operculum		Automatic VOI sets	MUSE
middle cingulate		Rank sets (Reset)	1
		Help	Done
		Quit	

NOT GREEN.
REMOVED