INFOS

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Addressed topics

Mask Approaches
Scenario: Input is already a skullstripped t2.nii
Image registration failed due to a huge lesion or aheavy deformed brain

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Mask Approaches

One of the approaches has to be chosen for image registrtion
Paramter: **x.wa.elxMaskApproach** has to be set to 0,1,2,3 or 4

Approach-0
 -bases on a combination of c1/c2/c3 compartments for mouse and template as input for registration
 - maskLesision: yes

Approach-1
 - bases on combination of c1/c2/c3 compartments for mouse and template as input for registration
 - uses a brainmask from c1+c2 with threshold=0.1
 - maskLesion: yes

Approach-2
 - use mouse' c1 compartment only, set values below 0.6 to zero and register to a template's combination of
         c1/c2/c3 template
 - maskLesion: yes
 → inf input t2.nii is already skullstripped this seems to be the best approach using Par0025affine &
         Par0033bspline_EM2.txt ,

Approach-3
 - recalc. skullstripping based on mt2.nii
 - register skullstripped mt2.nii to AVGT.nii
 - maskLesion: no

Approach-4
 - recalc. skullstripping based on mt2.nii
 - register skullstripped, intensity-scaled (range 0-1000) mt2.nii to AVGT.nii
 - maskLesion: no
 → can be used for large deformations or heavy lesions

Approach-5
 - register skullstripped t2.nii to AVGT.nii
 - maskLesion: no

OTHERS

 - initial rigid body transform: use 'trafoeuler3.txt' for large dislocations (translation shifts) instead of
         'trafoeuler2'
 - use bias field correction (set [BiasFieldCor] to 1) to run initial BSF if segmentation/registration fails

Scenario: Input is already a skullstripped t2.nii

Configfile settings:
 - [usePriorskullstrip]: [0]
 - [elxMaskApproach]: set to one of the approaches (0,1,2,3,4), but approach-2 seems to yield the best results
 - [elxParamfile]: - contain the paths to the affine and bspline parameter files

- Par0025affine.txt + Par0033bspline_EM2.txt seems to work
- but try also par_affine038CD1.txt + par_bspline033CD1.txt
  or par_ap4_affine.txt + par_ap4_bspline.txt

Image registration failed due to a huge lesion or a heavy deformed brain
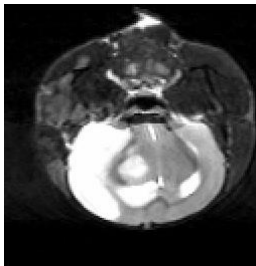
Problem: Registration does not work:

Solution: Change paramters in the project file:
   Steps:
- Edit configfile 'proj.m' ,if proj.m is the project parameter file of the respective study
- set: [**elxMaskApproach**] to 4
- replace parameter files of [**elxParamfile**] with 'par_ap4_affine.txt' + 'par_ap4_bspline.txt'
 - preserve order of parameter files (first affine, than bspline)
- example: x.wa.elxParamfile = { 'o:\antx\mritools\elastix\paramfiles\par_ap4_affine.txt'
   'o:\antx\mritools\elastix\paramfiles\par_ap4_bspline.txt' };
- type **antcb('reload')** or use **loadproj**-button to reload the project file
- select the specific mis-registered mouse from left listbox
- if steps [1]- [4] have been done before select step [**4] "xwarp-Elastix"** (otherwise select step [1]-
   [4]) and hit **[Run FUN, fun first]**