

How to correct by Intracranial Volume (ICV)

I'm going to suppose you did the pipeline thing over your MRI images and you already have the *study_mri.csv* file. The Freesurfer version I'm using makes an estimation of Intracranial volume and the pipeline scripts put it as *EstimatedTotalIntraCranialVol_eTIV* into the results file.

Let's say we want to get the hippocampus volume (HV) correct by ICV. Then we must get Left and Right HV and calculate its medium value. **$HV = 0.5*(HVR+HVL)$**

Now first step is to fit a straight line for HV vs ICV and the ICV mean value ($\langle ICV \rangle$). The adjusted HV will be **$aHV = HV - b*(ICV - \langle ICV \rangle)$** , with *b* as the regression coefficient of HV vs ICV

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