

Dice Coefficients

ds000109

ds000120

FSL perm

SPM perm

ds000001

0.361

AFNI perm FSL perm SPM perm

0.482

FSL

AFNI

Figure 4 Dice coefficients comparing the thresholded positive and negative T-statistic maps computed for each pair of software package and inference method for each of the three reproduced studies. Dice coefficients were computed over the intersection of the pair of analysis masks, to assess only regions where activation could occur in both packages. Percentage

FSL

0.2

0.039

AFNI

FSL

- 0.2

notably high, at 0.743, perhaps because it is testing a main effect with ample power.

of 'spill over' activation, i.e. the percentage of activation in one software's thresholded statistic map that fell outside of the analysis mask of the other software is displayed in grey; left value for row software, right value for column software. For ds000001 increases, FSL permutation obtained no significant results, thus generating Dice coefficients of zero; for ds000109 decreases, only AFNI and FSL parametric obtained a result and hence only one coefficient is displayed. Dice coefficients are mostly below 0.5, parametric-nonparametric intra-software results are generally higher; ds000120's F-statistic results are