Distribution of choices in pipelines for signal processing and statistical analysis based on their (dis-)agreement with expected hypotheses outcomes In Agreement In Disagreement Study 1 Hypotheses 1, 2 & 7 Study 1 Hypotheses 3, 4, 5 & 6 Study 2 all Hypotheses (strong literature support) (weak literature support) (strong & weak literature support) Single Metric Single Metric Single Metric LowPass Manual Pruning Manual Pruning LowPass Manual Pruning BandPass BandPass BandPass ้วก 10 20 HighF HighPass HighPass Combined Combined Combined Metrics Metrics Metrics No Filter Combined Methods No Filter Combined Methods No Filter Combined Methods Pruning Trial Rejection/ No Removal Trial Rejection/ No Removal Trial Rejection No Removal Motion Artifacts Block Averaging Block Averaging Block Averaging AR-TRI S AR-TRI S AR-TRI S Unknown Regressor Unknown Regressor Unknown Regresse PCA of the Short Channels PCA of the Short Channels PCA of the Short Chann Short Cha Short Cha Consecutive ecutive Gaussian 20 20 15 30 20 30 Multiple Regressors Multiple Regressors Multiple Regressor Other Regressors Canonical Gamma Canonica Gamma Canonical Glover Glover SPM Glover **HRF Regressors** HbO only HbO only HbO only Other Metric HbO and HbR HbO and HbR Other Metric HbO and HbR Signal Amp. (windowed) Signal Amp. (windowed) Signal Amp. (windowed) Other/Multiple Other/Multiple 10 15 20 25 30 20 30 GLM Beta Valu Signal Type Other/Multiple Signal Spaces Other/Multiple Signal Spaces Other/Multiple Signal Spaces ROI ROI ROI Signal Space Multiple Methods Multiple Methods Multiple Methods Other/Unknown Stat. Method Other/Unknown Stat. Method 80 Other/Unknown Stat. Method = 0.05 0.05 alpha = 0.050.05 alpha < 0.05 alpha alpha < 0.05 T-Tests No Correction Mixed Effects Models No Correction No Correction Mixed Effects Models Mixed Effects Models Significance Level

Correction

Correction

Mult. Comparisons Correction

Correction

Preprocessing

HRF Extraction

Signals for Statistical

Statistical Tests

Metric

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