Medical Xpress

# Spatial signatures of anesthesia-induced burst-suppression differ between primates and rodents

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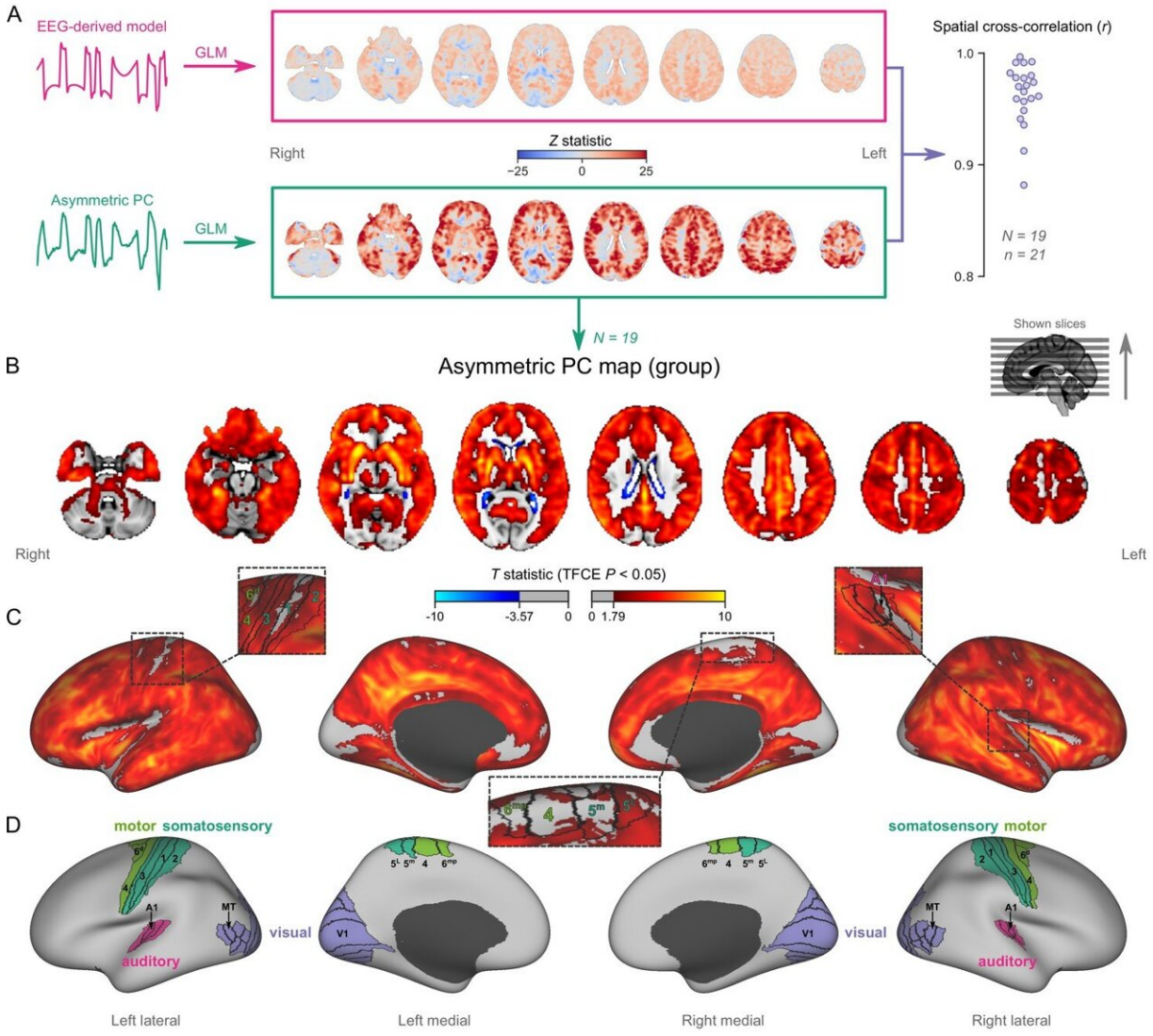

Mapping burst-suppression in anesthetized humans without electroencephalogram (EEG). (A) Maps of burst-suppression are computed via general linear model (GLM) analysis using one of two regressors—either the EEG-derived hemodynamic model or the functional magnetic resonance imaging (fMRI)-derived asymmetric principal component (PC). The resulting Z statistic maps, for an example subject are shown here in the MNI152 template space. Neighborhood cross-correlation values between the two types of Z statistic maps are plotted on the right, across all runs with asymmetric PCs (N=19 subjects, n=21 EEG-fMRI runs, see Figure 2—source data 1). (B) The group burst-suppression map, computed via a second-level analysis of the single-subject asymmetric PC GLMs, is shown here overlaid on the MNI152 volumetric template. The group statistics were carried out with the FSL (FMRIB's Software Library) tool randomize; the resulting T statistic maps were thresholded using threshold-free cluster enhancement (TFCE) and a corrected p