



**Additional file 10.** Statistical parametric maps of disease-associated grey matter atrophy in each patient group relative to healthy controls, based on a voxel-based morphometric analysis. Maps are rendered on representative sections of the group mean T1-weighted MR image in MNI space, thresholded at  $p < 0.001$  uncorrected for multiple voxel-wise comparisons over the whole brain. The colour bars (right) code voxel-wise t-values of grey matter differences. The plane of each section is indicated using the corresponding MNI coordinate (mm); the left cerebral hemisphere is shown on the left in the coronal sections and on top in the axial sections. nfvPPA, patient group with nonfluent variant primary progressive aphasia; svPPA, patient group with semantic variant primary progressive aphasia.