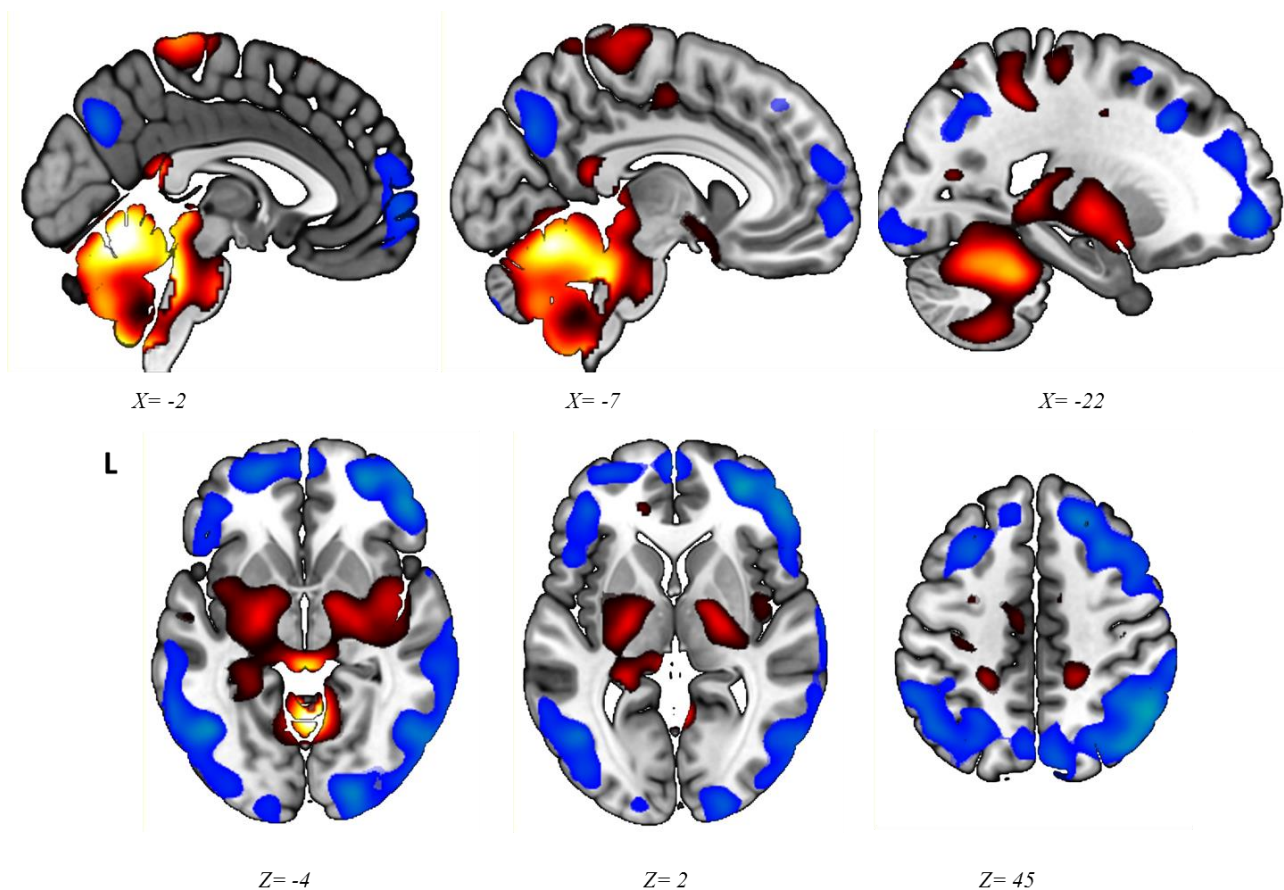
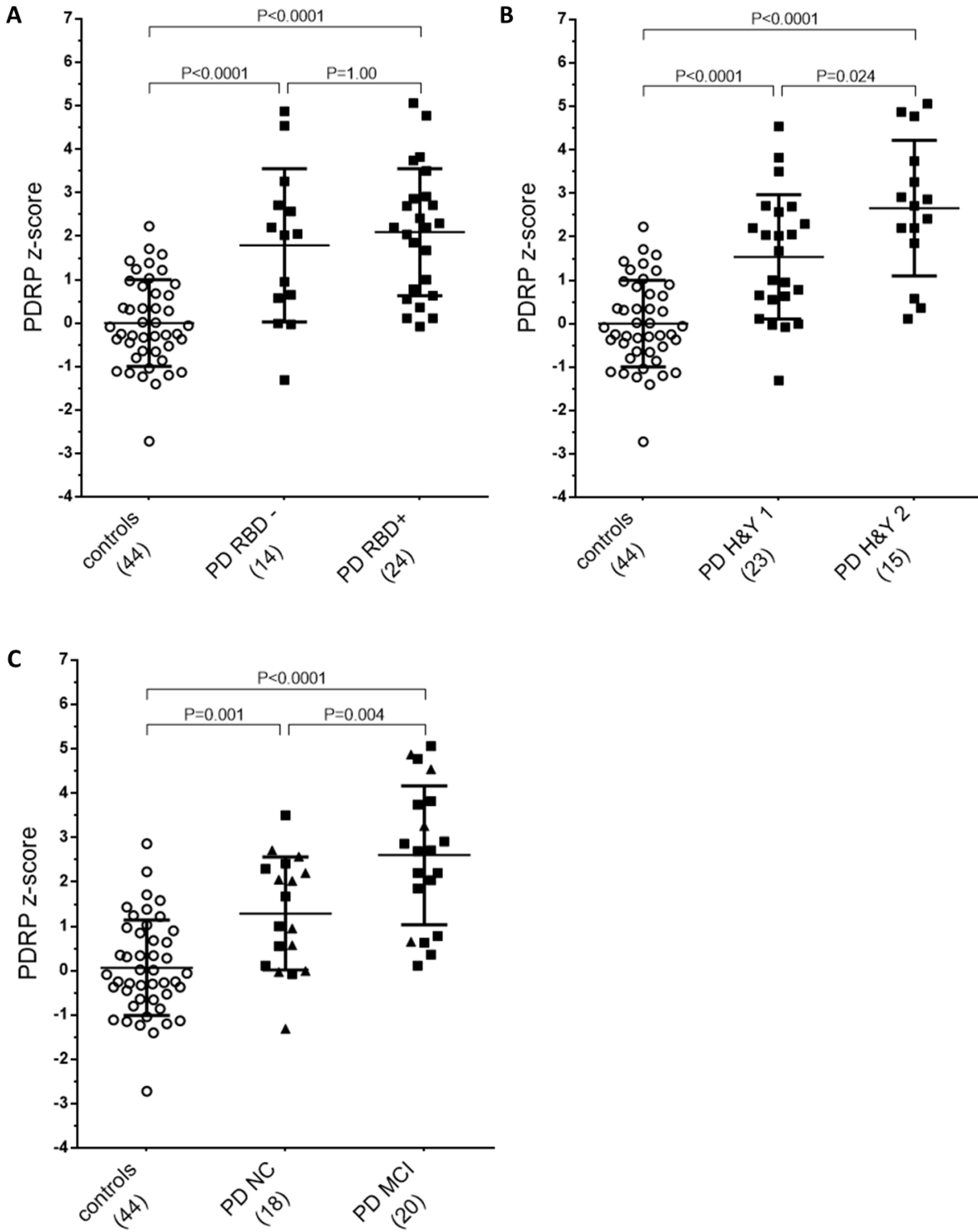


Supplemental Figure 1 – Stable voxels of the Parkinson’s disease related pattern (PDRP)



Stable voxels (90% confidence interval not straddling zero after bootstrap resampling) of the PDRP (for detailed description of identification, see reference 16 in the main article) are visualized by overlaying them on a T1 MRI template. Positive voxel weights are color-coded red (relative hypermetabolism) and negative voxel weights are color-coded blue (relative hypometabolism). L=left. Coordinates in the axial (Z) and sagittal (X) planes are in Montreal Neurological Institute (MNI) standard space.

Supplemental Figure 2 – Expression of the PDRP across groups



Expression of the PDRP was calculated in 38 *de novo*, treatment-naïve PD patients and 44 corresponding controls (see main text and reference 23 for details). PDRP subject scores were z-transformed to the 44 controls, such that control mean was 0 with a standard deviation of 1. PDRP z-scores were compared across controls, PD patients without RBD and PD patients with RBD with a one-way ANOVA ($F(81)= 24.01$; $P<0.0001$) (Figure 2A). PDRP z-scores were similarly compared across controls, PD patients with unilateral disease (H&Y stage 1), and PD patients with bilateral disease (H&Y stage 2): $F(81)= 29.54$; $P<0.0001$ (Figure 2B). Finally, PDRP z-scores were compared across controls, PD patients with normal cognition (PD NC) and PD patients with mild cognitive impairment (PD MCI): $F(81)= 32.46$; $P<0.0001$ (Figure 2C). P-values in post-hoc group comparisons were Bonferroni-corrected.