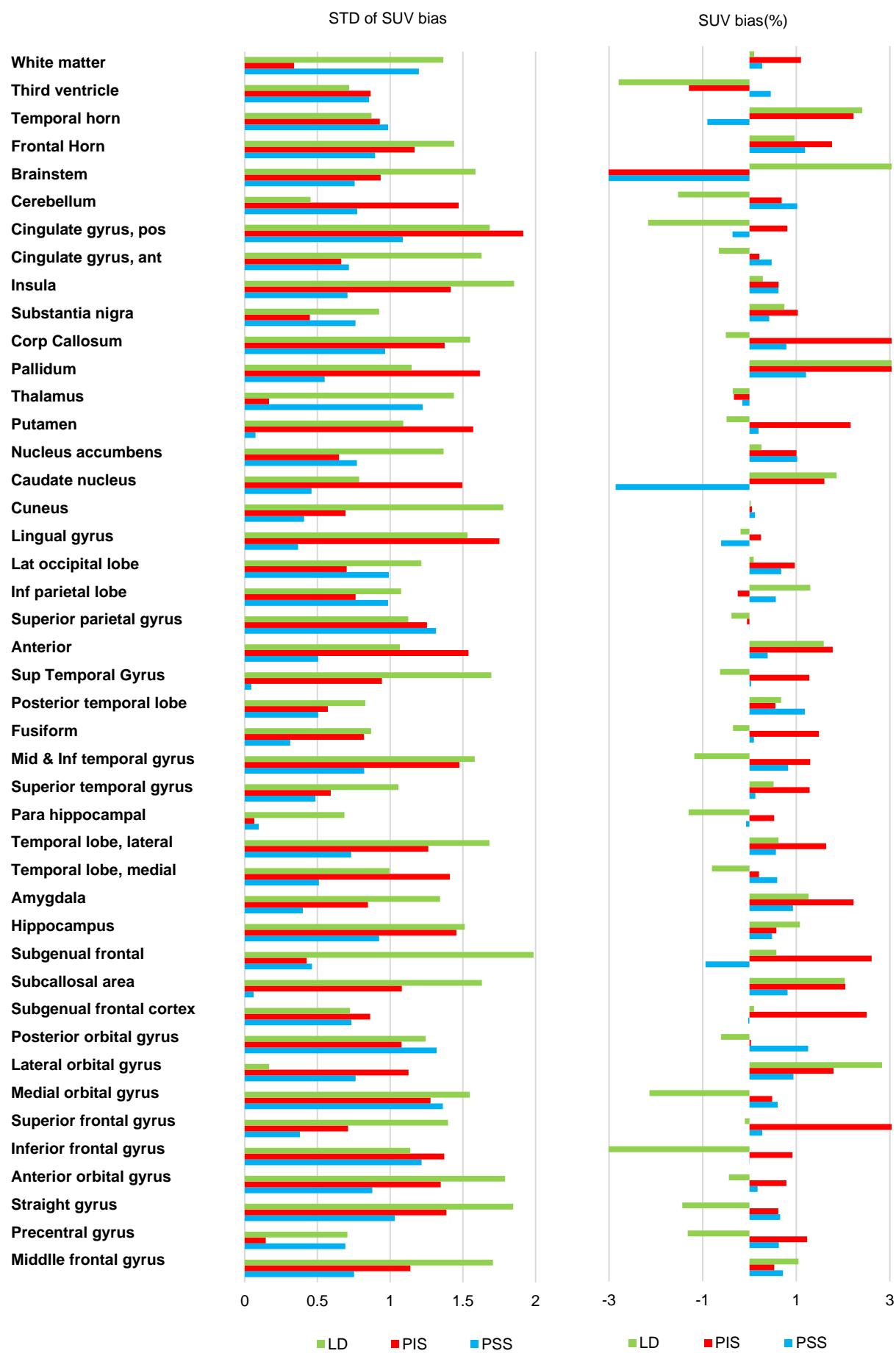


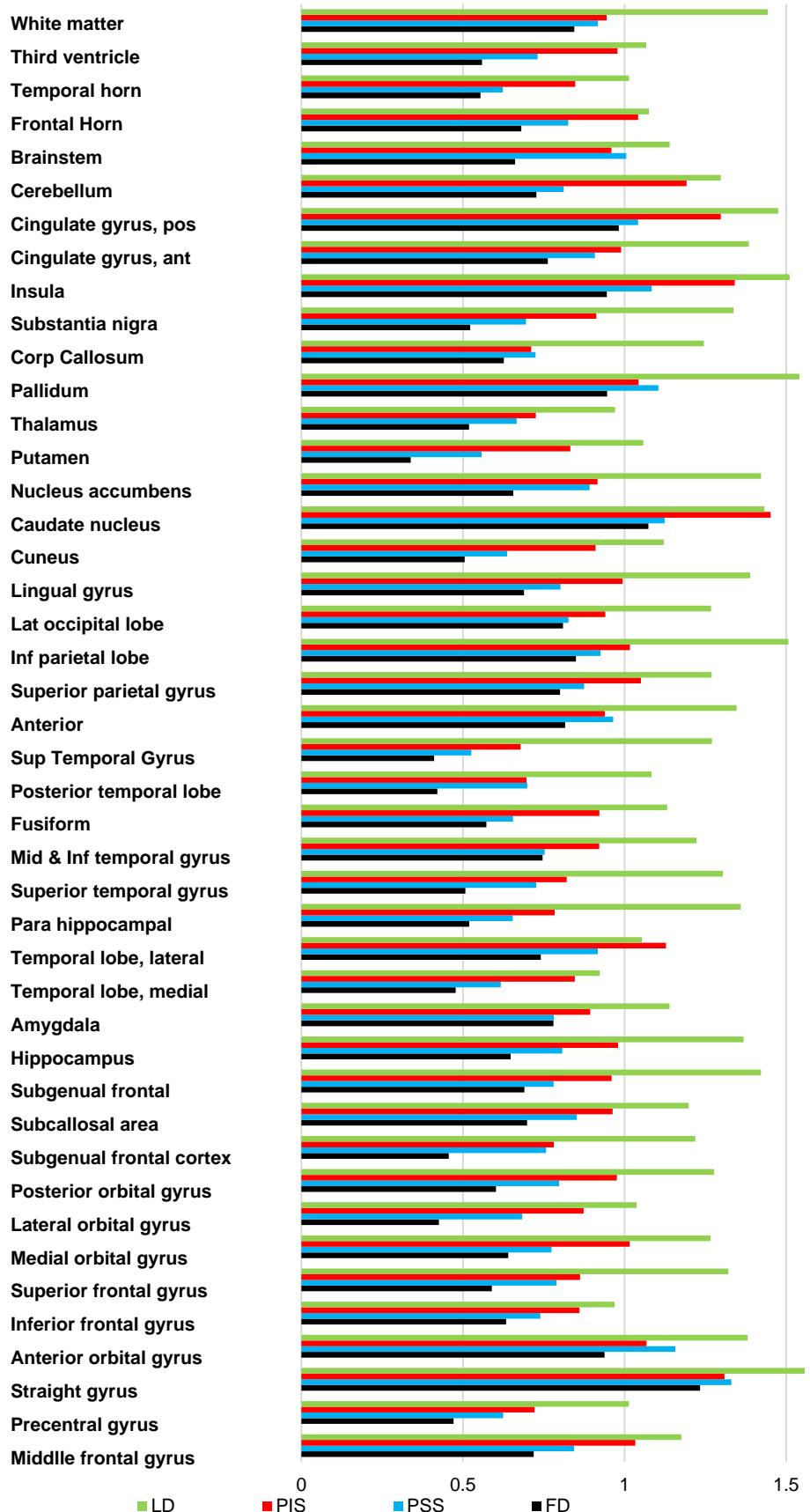
**Supplemental Figure 1.** Representative clinical  $^{18}\text{F}$ -FDG brain PET images from two extremes of image evaluation. The images shown are (A) low-dose, (B) deep learning prediction in image space, (C) deep learning prediction in sinogram space, (D) full-dose. The red numbers indicate scores assigned by one expert physician to images.



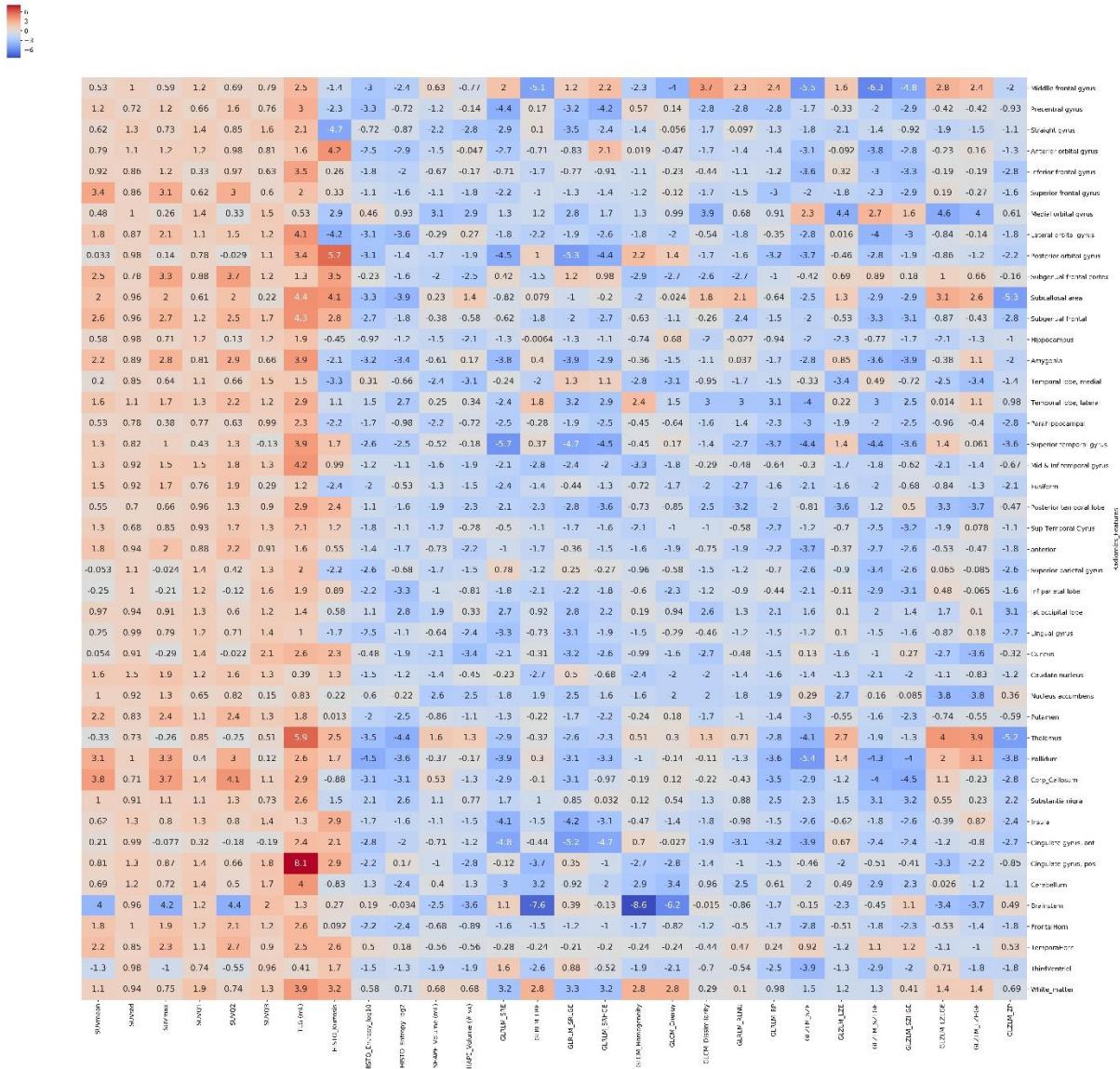
**Supplemental Figure 2.** Plots of SUV bias standard deviation (left panel) and mean SUV bias (%) (right panel) in the different brain regions for LD, PIS, and PSS PET images. The left and right regions were merged, thus reducing the number of brain regions to 44.



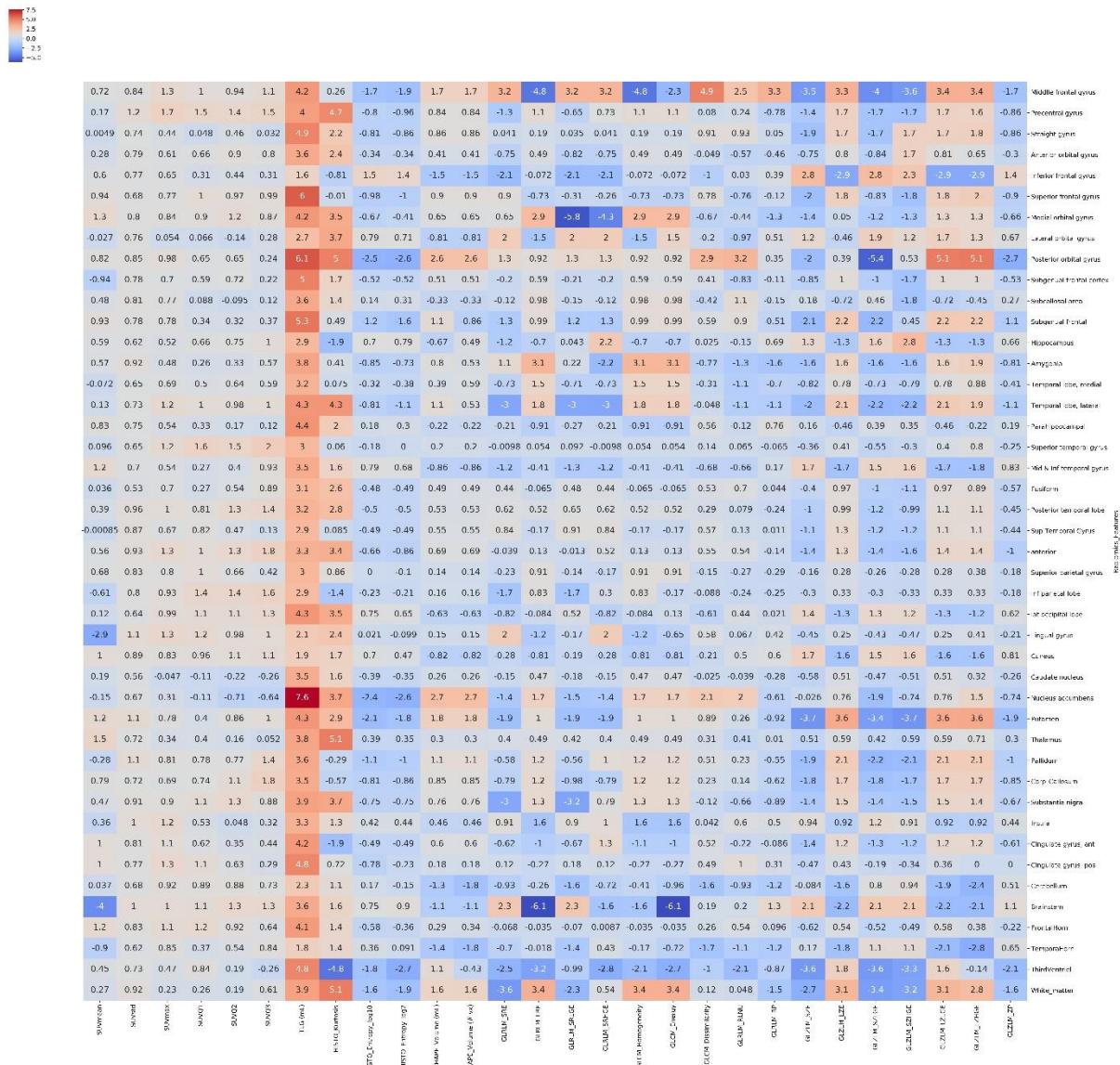
STD of SUV for each region



**Supplemental Figure 3.** Plot of SUV standard deviation in the different brain regions for LD, PIS, and PSS PET images. The left and right regions were merged, thus reducing the number of brain regions to 44.



**Supplemental Figure 4.** Heat map of the relative error of 28 radiomics features calculated across 83 brain regions for PIS PET images with respect to reference FD PET images.



**Supplemental Figure 5.** Heat map of the relative error of 28 radiomics features calculated across 83 brain regions for PSS PET images with respect to reference FD PET images.