## Supplementary Figure 1: Comparison of $V_T$ Estimates by 1T, 2T, and MA1 Models

(A) shows estimates of  $V_T$  made by 1T and 2T models, which were highly correlated ( $R^2$ =0.984). (B) shows that 1T estimates of  $V_T$  were 8.6% lower than 2T estimates on average. (C) shows estimates of  $V_T$  made by 2T and MA1 ( $t^*$ =30) models, which were highly correlated ( $R^2$ =0.990). (D) shows that MA1 estimates of  $V_T$  were 0.5% lower than 2T estimates on average. Unstable fits for 2T and corresponding fits for 1T and MA1 were excluded.



## Supplementary Figure 2: Correlation of V<sub>T</sub> to SUV across scans

 $V_{\rm T}$  values estimated by MA1 with 180 min of imaging data were highly linearly correlated with average *SUV* for 60-90 min in **(A)** (*n*=12, *R*<sup>2</sup>=0.803), 90-120 min in **(B)** (*n*=12, *R*<sup>2</sup>=0.814), 120-150 min in **(C)** (*n*=12, *R*<sup>2</sup>=0.836), 150-180 min in **(D)** (*n*=12, *R*<sup>2</sup>=0.851), 180-210 min in **(E)** (*n*=8, *R*<sup>2</sup>=0.902), and for 210-240 min in **(F)** (*n*=8, *R*<sup>2</sup>=0.913).



## Supplementary Figure 3: Relationship of Peripheral Cortisol to [<sup>18</sup>F]AS2471907 Availability Correlation of [<sup>18</sup>F]AS2471907 whole brain $V_T$ to area under the curve (AUC) of cortisol concentration in (A) and to slope of decline in plasma cortisol concentration in (B). Measures

were calculated from plasma cortisol sampled at 0, 30, 60, and 90 min post-injection. Exploratory post-hoc analyses of  $V_T$  with peripheral cortisol across all ROIs did not reveal any significant correlations with any region.

