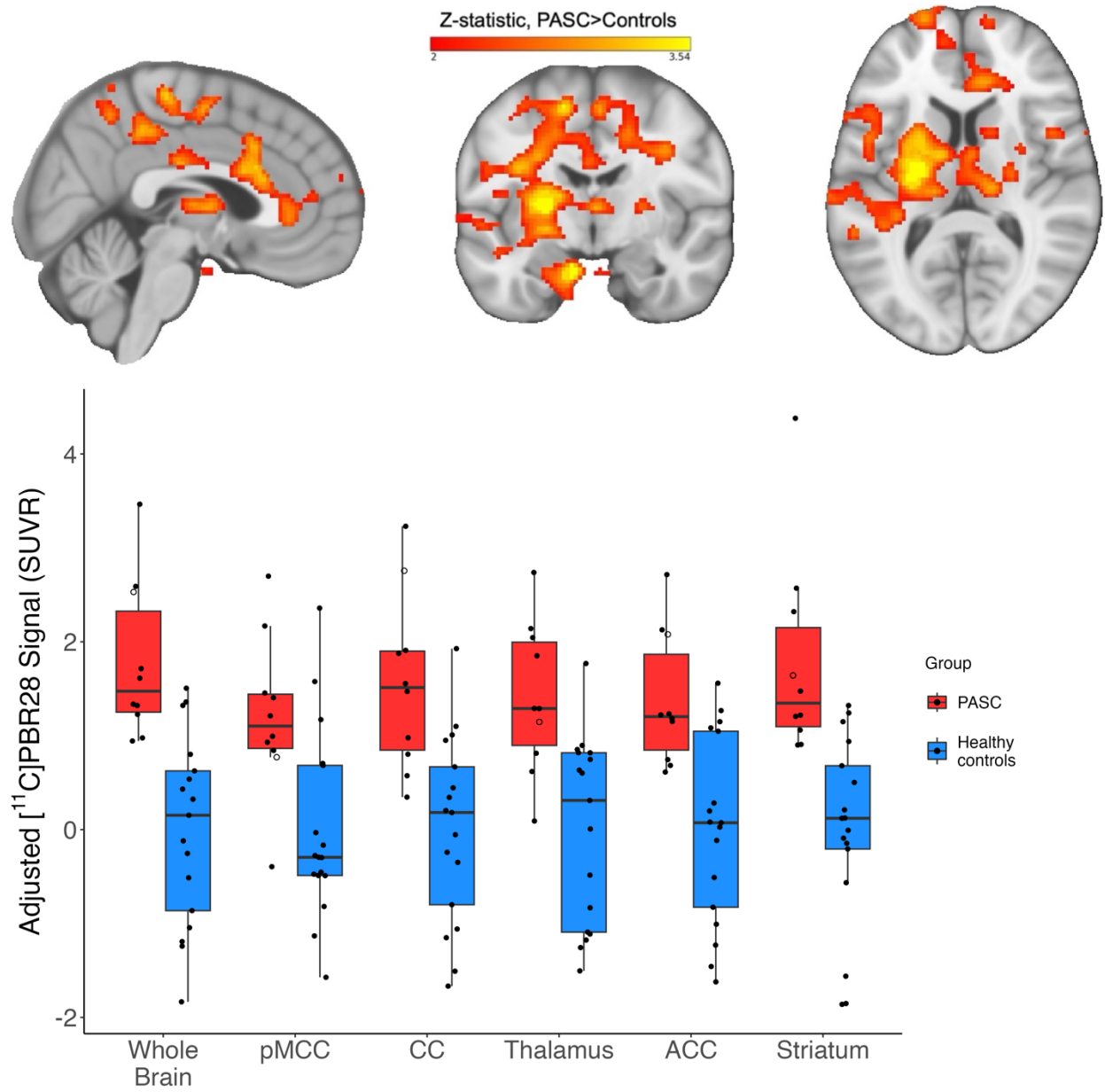


SUPPLEMENTAL DATA

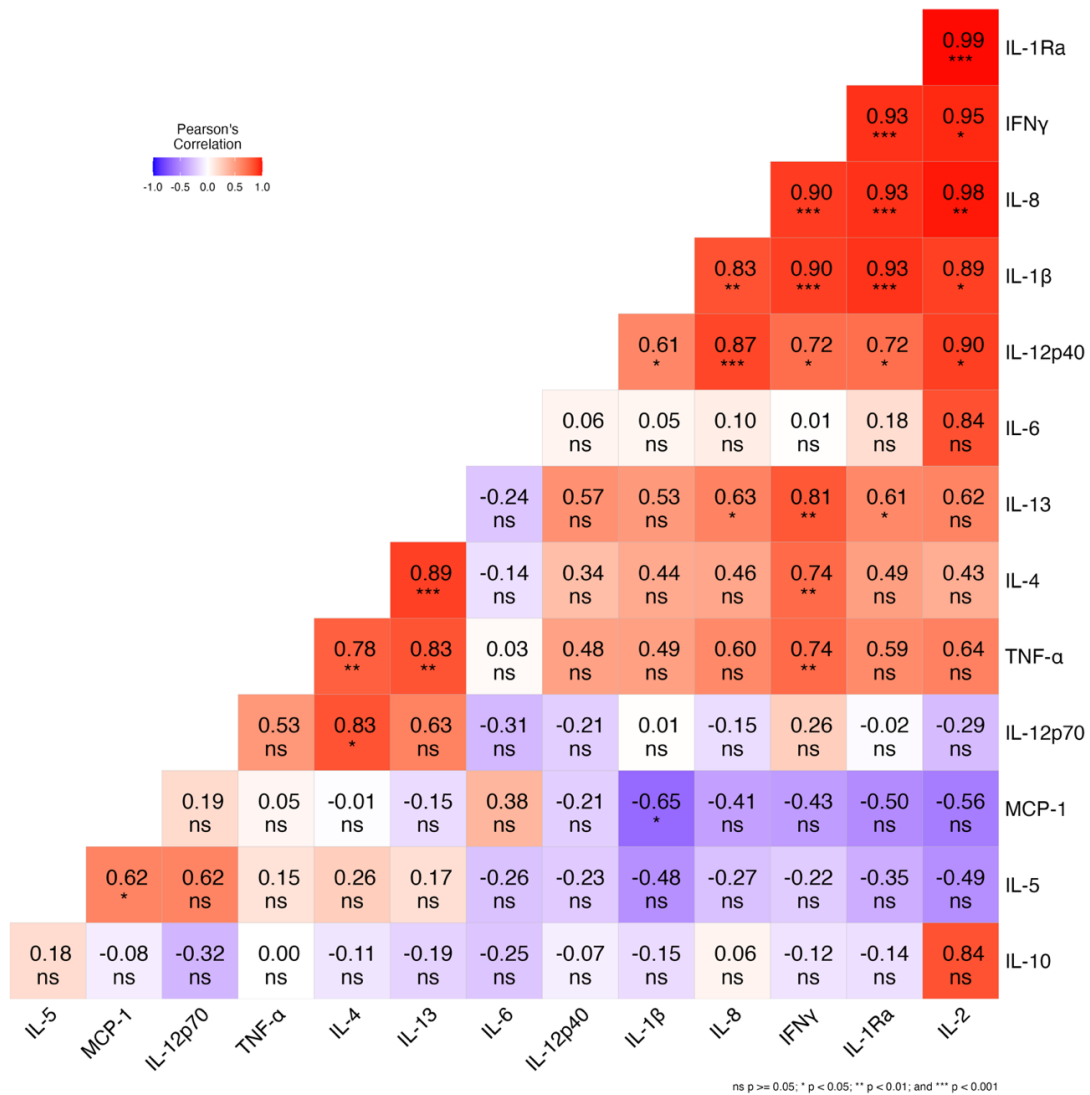
Supplemental Figure 1



Supplemental Figure 1 legend:

While we statistically controlled for sex in our primary analysis (Figure 1), there was a higher proportion of females in the PASC group than the controls. Therefore, as an additional validation analysis, we performed a female-only unpaired between-groups analysis (PASC n=10, control n=17), conducted in the same way as Figure 1. In the female-only analysis, the average injected radioligand dose did not differ between PASC cases (mean 13.97 mCi, SD 1.33) and controls (13.04, 1.74), $t(25)=1.46$, $p=.16$, and age did not differ between PASC cases (mean 48.80 years, SD 14.34) and controls (48.53, 13.43), $t(25)=0.05$, $p=.96$. While it is standard practice to statistically control for TSPO genotype in [^{11}C]PBR28 studies, the genotype distribution did not statistically differ between female PASC cases (GA=6, GG=4) and female controls (GA=5, GG=12), Chi-square=2.44, $p=.12$. BMI was higher in PASC cases (27.03, 5.36) than in controls (23.13, 3.09), $t(25)=2.41$, $p=.02$. Therefore, we statistically controlled for both genotype and BMI in this analysis. In the PASC group bar graph, cases that were hospitalized during their acute COVID-19 illness are represented by open circles.

Supplemental Figure 2



Supplemental Figure 2 legend:

Correlation matrix showing relationships among cytokines from a 15 cytokine multiplex (Millipore HCYTA-60K Luminex magnetic bead panel performed by Eve Technologies, Calgary Canada), from the 11 PASC participants that provided platelet-poor plasma samples immediately before PET neuroimaging.

Analytes included: GM-CSF, IFN γ , IL-1 β , IL-1RA, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12(p40), IL-12(p70), IL-13, MCP-1, TNF α . * = $p < .05$; ** = $p < .01$; *** = $p < .001$

Supplemental Figure 3

PASC participant	1	2	3	4	5	6	7	8	9	10	11	12
Headache	9	8	0	2	0	7	10	6	0	9	6	2
Unrested	10	8	4	6	1	0	10	9	7	5	10	7
Muscle } Pain	10	3	0	2	6	6	10	6	5	1	3	2
Joint }												
Short Term Memory	7	6	6	4	4	0	10	0	2	6	2	7
Processing Information	9	6	6	6	4	0	10	3	3	6	3	5

Supplemental Figure 3 legend:

Each of the 12 PASC participants rated symptoms from the ICC “Neurological impairments” cluster on a 1-10 severity scale and marked their onset. For Pain, the ICC asked about “Significant pain” but the history questionnaire distinguished between muscle and joint pain.

Light green = Not reported as a problem

Orange = “This was a problem for me before COVID”

Pink = “This is a problem for me since I had COVID”

Red = “This is a serious problem for me since I had COVID”

Supplemental Table 1

Affective items	PASC mean (SD)	Control mean (SD)
Sadness	0.58 (0.67)	0.095 (0.48)
Pessimism	0.67 (0.49)	0.024 (0.15)
Sense of failure	0.00 (0.00)	0.024 (0.15)
Dissatisfaction	0.67 (0.65)	0.095 (0.30)
Guilt	0.17 (0.39)	0.023 (0.15)
Feeling of punishment	0.00 (0.00)	0.048 (0.22)
Disappointment in self	0.17 (0.39)	0.024 (0.16)
Self-criticism	0.58 (0.51)	0.048 (0.22)
Suicidal thoughts	0.083 (0.29)	0.00 (0.00)
Crying episodes	0.42 (0.90)	0.048 (0.22)
Irritability	0.42 (0.51)	0.24 (0.69)
Social withdrawal	0.50 (0.52)	0.048 (0.22)
Indecisiveness	1.00 (0.74)	0.00 (0.00)
Average affective items	0.40 (0.23)	0.055 (0.10)
Somatic Items		
Change of body image	0.42 (0.51)	0.024 (0.15)
Ability to work	1.17 (0.94)	0.073 (0.26)
Sleep difficulties	0.75 (0.45)	0.17 (0.44)
Fatigability	1.42 (0.79)	0.073 (0.26)

Loss of Appetite	0.58 (0.79)	0.024 (0.15)
Weight loss	0.083 (0.29)	0.048 (0.22)
Health anxiety	1.08 (0.67)	0.00 (0.00)
Loss of libido	0.83 (1.03)	0.071 (0.26)
Average somatic items	0.79 (0.39)	0.060 (0.13)
Total score averages	11.58 (1.74)	1.14 (5.58)

Supplemental Table 1 legend:

PASC and Control participant means for BDI items within the affective and somatic subscales of the BDI. A mixed-model ANOVA revealed a significant interaction driven by high somatic item means within the PASC group.