Supplemental Materials and Methods

Subjects with complications such as SLE and hyperthyroidism were excluded, since the presence of these complications could potentially affect the serum levels of PS-PLA$_1$ [1, 2, 3].

To obtain the serum samples, whole blood samples were directly collected into glass tubes and allowed to stand for 15 min at room temperature to allow the blood to clot; the serum was then separated by centrifugation at 1500 ×g for 5 min. The control samples were the same as the samples used in previous studies [1, 3, 4], although the serum PS-PLA$_1$ levels in healthy subjects were different from those reported in previous articles, since an improved measurement system, especially the improved calibrator, was used in the present study.

The current study was performed in accordance with the ethical guidelines laid down in the Declaration of Helsinki. Written informed consent for sample analysis was obtained from some of the patients. For the remaining participants from whom written informed consent could not be obtained (owing to their having been discharged or transferred from the hospital), informed consent was obtained in the form of an opt-out on the website, as follows. Patients were informed about the study on the website and those who unwilling to be enrolled in our study were excluded. The study design was approved by The University of Tokyo Medical Research Center Ethics Committee (2602 and 2020206NI).

All the statistical analyses were performed using SPSS (Chicago, IL). The results are expressed as dot plots. Differences between any two groups were evaluated by the Mann-Whitney U test, differences among three independent groups were assessed by an independent Kruskal-Wallis test, followed by the Games Howell test for

post hoc analysis, correlations between any two parameters were evaluated by Spearman's correlation test, and differences between two paired groups were assessed by the Wilcoxon signed-rank sum test, since normality or equality of variance was rejected by the Kolmogorov-Smirnov test or the Levene test for most of the parameters. $P < 0.05$ was regarded as denoting statistical significance in all the analyses.

References

1. Sawada T, *et al.* Serum phosphatidylserine-specific phospholipase A1 as a novel biomarker for monitoring systemic lupus erythematosus disease activity. *Int J Rheum Dis* **22**, 2059-2066 (2019).

2. Iwata Y, *et al.* Higher serum levels of autotaxin and phosphatidylserine-specific phospholipase A1 in patients with lupus nephritis. *Int J Rheum Dis* **24**, 231-239 (2021).

3. Nakawatari K, *et al.* Elevated phosphatidylserine-specific phospholipase A1 level in hyperthyroidism. *Clin Chim Acta* **503**, 99-106 (2020).

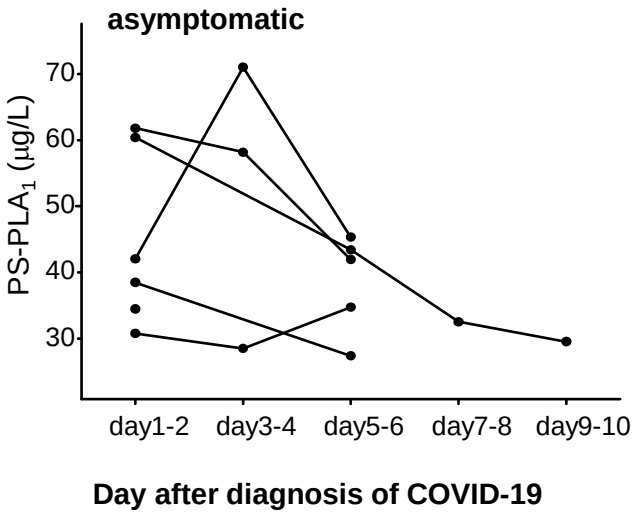
4. Kurano M, *et al.* Association between serum autotaxin or phosphatidylserine-specific phospholipase A1 levels and melanoma. *J Dermatol* **45**, 571-579 (2018).

Supplemental Table 1. Correlations of the serum PS-PLA$_1$ levels with clinical parameters

day	anti-SARS-CoV-2 IgM (A.U.)	anti-SARS-CoV-2 IgG (A.U.)	CRP (mg/L)	D-dimer (μg/L)
day 1-2	r = -0.486, p = 0.329, n = 6	r = -0.086, p = 0.872, n = 6	r = -0.429, p = 0.397, n = 6	r = -1.000, p = 0, n = 3
day 3-4	r = -0.211, p = 0.416, n = 17	r = -0.273, p = 0.288, n = 17	r = 0.004, p = 0.987, n = 16	r = -0.161, p = 0.582, n = 14
day 5-6	r = 0.179, p = 0.238, n = 45	r = 0.088, p = 0.567, n = 45	r = 0.399, p = 0.009, n = 42	r = 0.316, p = 0.057, n = 37
day 7-8	r = -0.089, p = 0.512, n = 57	r = -0.197, p = 0.143, n = 57	r = 0.393, p = 0.003, n = 55	r = -0.023, p = 0.867 n = 55
day 9-10	r = -0.193, p = 0.117, n = 67	r = -0.195, p = 0.113, n = 67	r = 0.356, p = 0.003, n = 66	r = -0.118, p = 0.363, n = 62
day 11-12	r = -0.326, p = 0.003, n = 79	r = -0.393, p = 0.003, n = 79	r = 0.267, p = 0.018, n = 78	r = -0.315, p = 0.006, n = 74
day 13-14	r = -0.174, p = 0.152, n = 69	r = -0.261, p = 0.031, n = 69	r = 0.393, p = 0.001, n = 66	r = -0.072, p = 0.572, n = 64
day 15-16	r = 0.221, p = 0.131, n = 48	r = -0.329, p = 0.022, n = 48	r = 0.246, p = 0.099, n = 46	r = -0.008, p = 0.959, n = 45
day 17-18	r = 0.065, p = 0.792, n = 19	r = -0.175, p = 0.473, n = 19	r = 0.256, p = 0.277, n = 20	r = 0.129, p = 0.581, n = 20
day 19-20	r = -0.125, p = 0.600, n = 20	r = -0.104, p = 0.663, n = 20	r = -0.230, p = 0.329, n = 20	r = -0.136, p = 0.578, n = 19

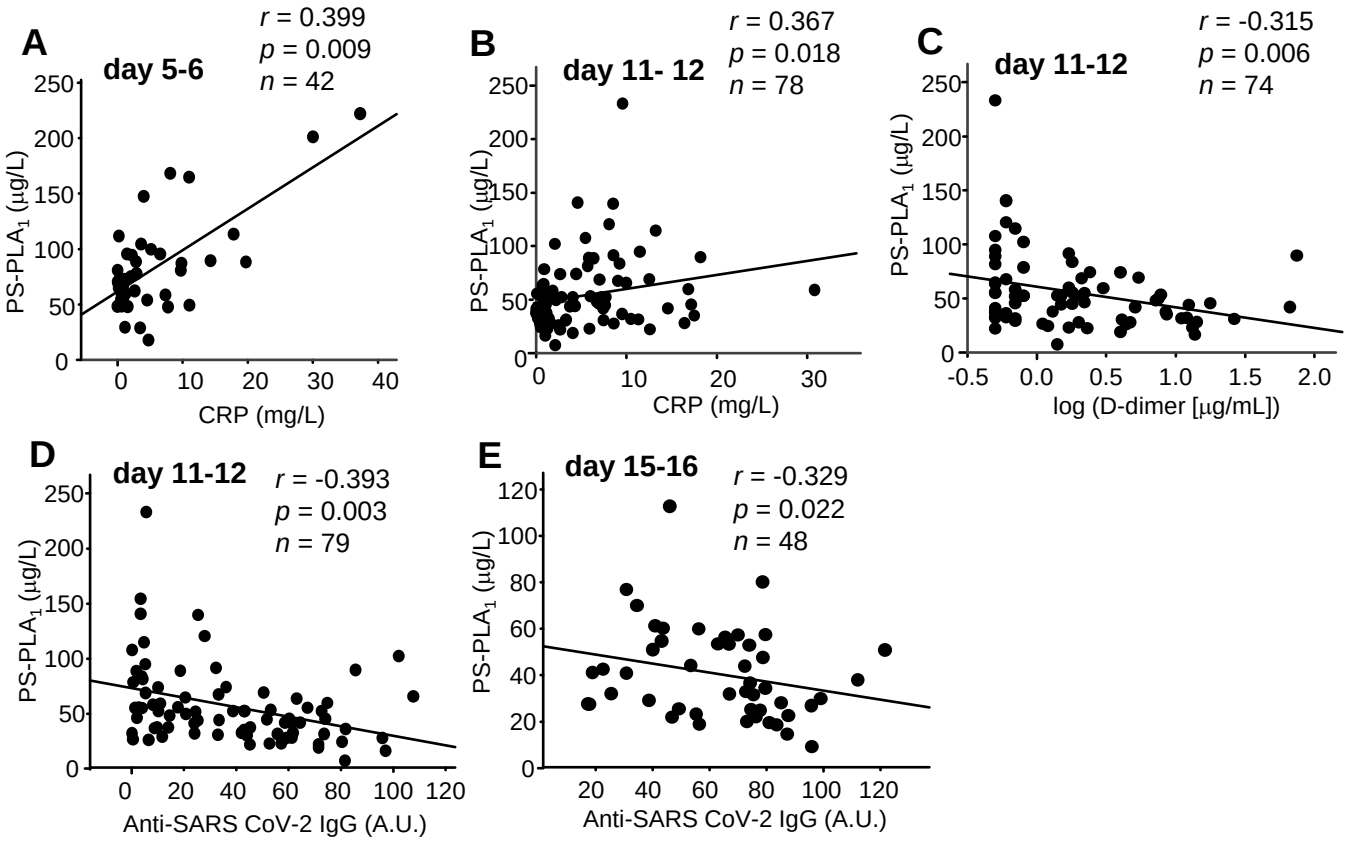
Correlations between two parameters were evaluated by the Spearman correlation test.

Supplemental Figure 1



Supplemental Figure 1. Serum PS-PLA$_1$ levels in subjects with asymptomatic COVID-19. Time-course of the serum PS-PLA$_1$ levels in asymptomatic COVID-19 patients (n = 6). The horizontal bars represent the means of independent samples.

Supplemental Figure 2



Supplemental Figure 2. Correlations of the serum PS-PLA$_1$ levels with clinical parameters. Correlations of the serum PS-PLA$_1$ levels with the serum CRP, D-dimer, and anti-SARS-CoV-2 antibody levels are shown. (A, B) Correlations between the serum PS-PLA$_1$ levels and serum CRP levels on day 5-6 (A) and day 11-12 (B). (C) Correlations between serum PS-PLA$_1$ levels and serum D-dimer levels on day 11-12. (D, E) Correlations between the serum PS-PLA$_1$ levels and serum anti-SARS-CoV-2 IgG titers on day 11-12 (D) and day 15-16 (E). Correlations between any two parameters were evaluated by Spearman's correlation test.