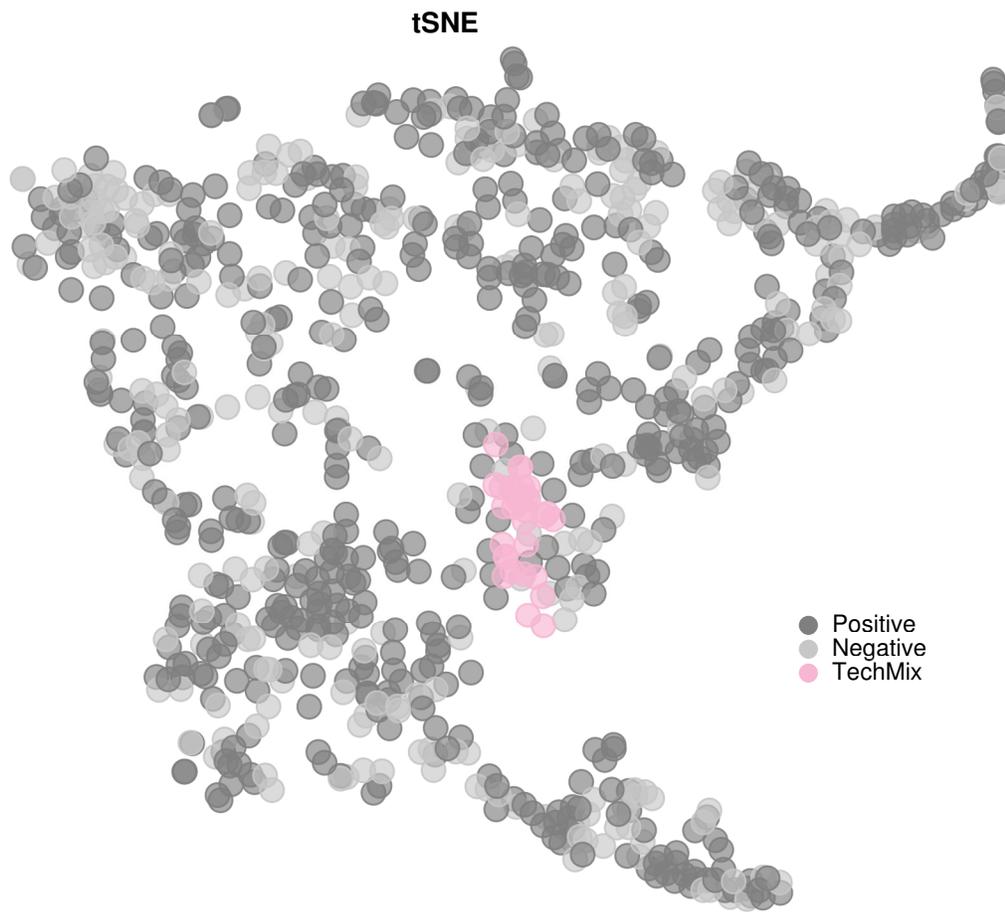


SUPPLEMENTARY MATERIAL

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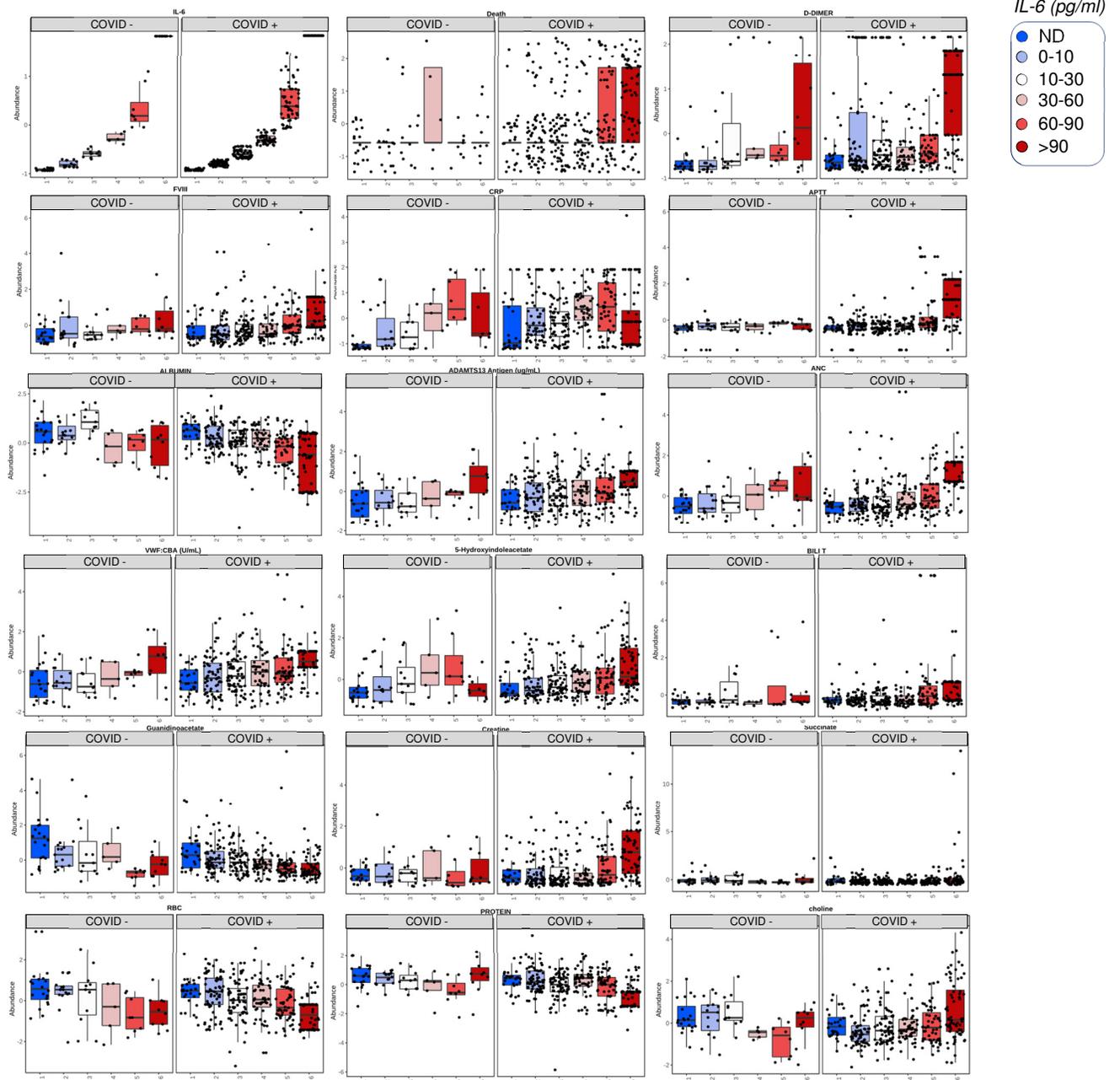
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SUPPLEMENTARY FIGURES



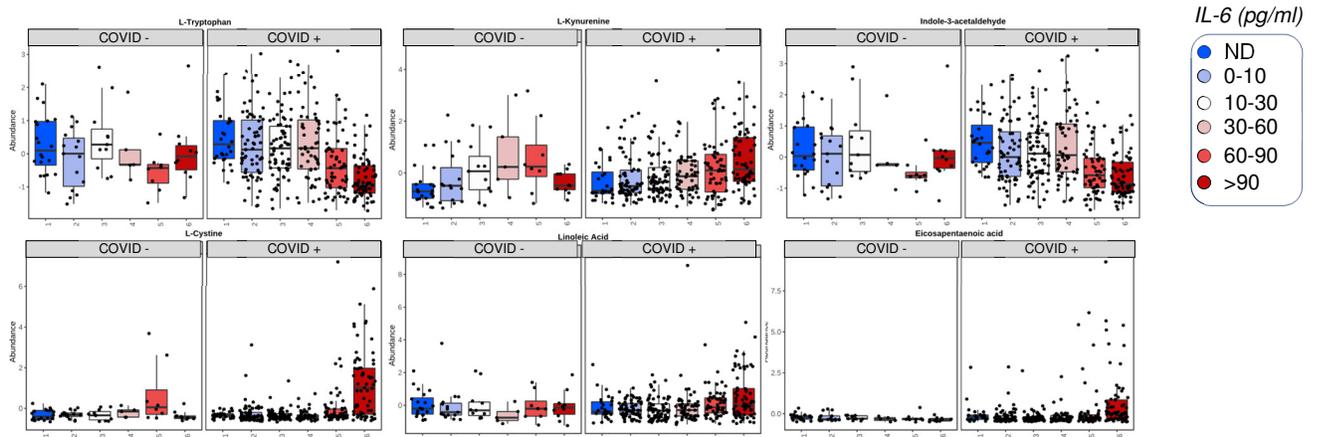
Supplementary Figure S1 – tSNE Analysis of Metabolomics data confirms quality of the analysis, with technical mixes clustering together (pink).

Impact of IL-6



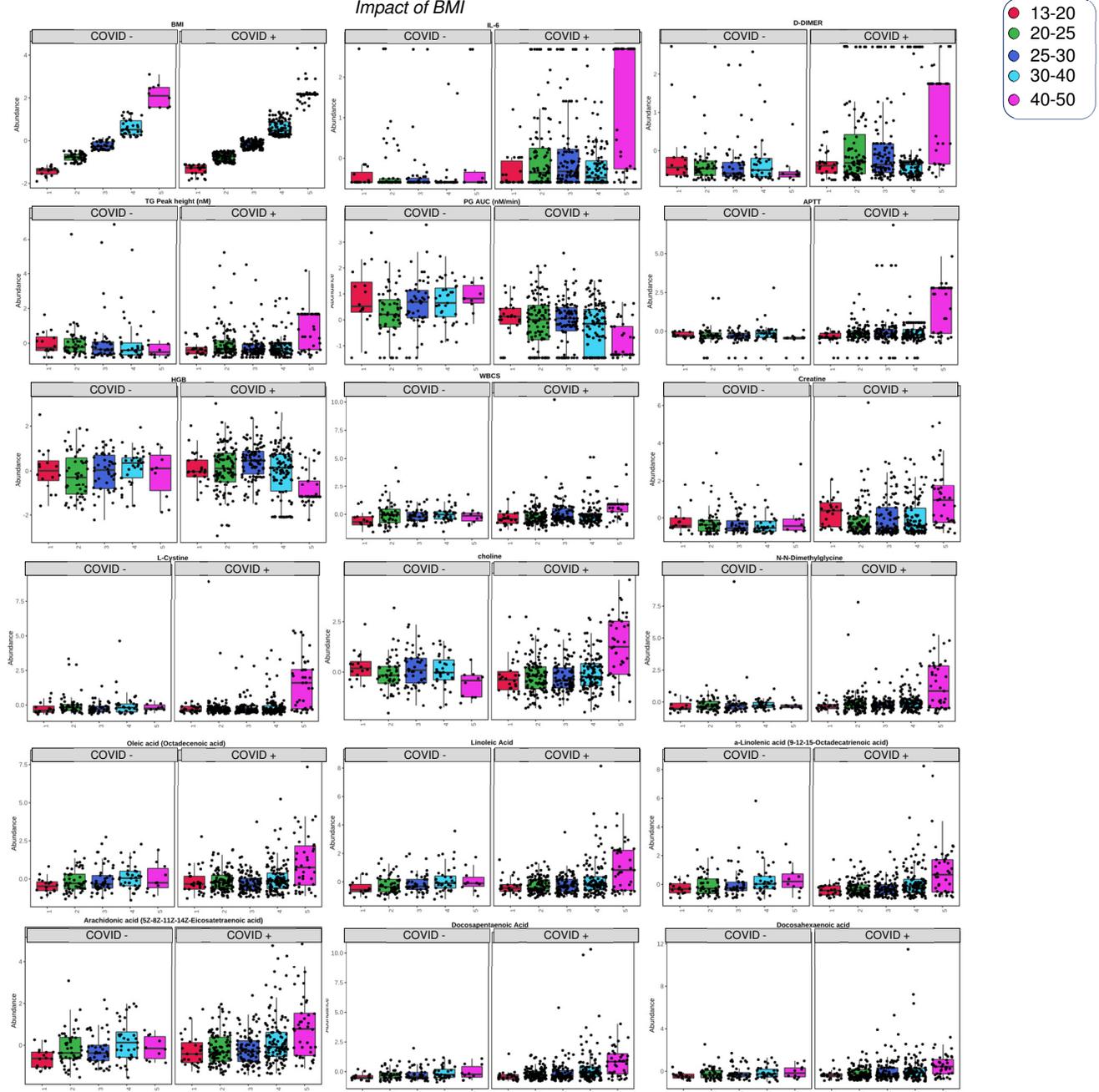
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Impact of IL-6



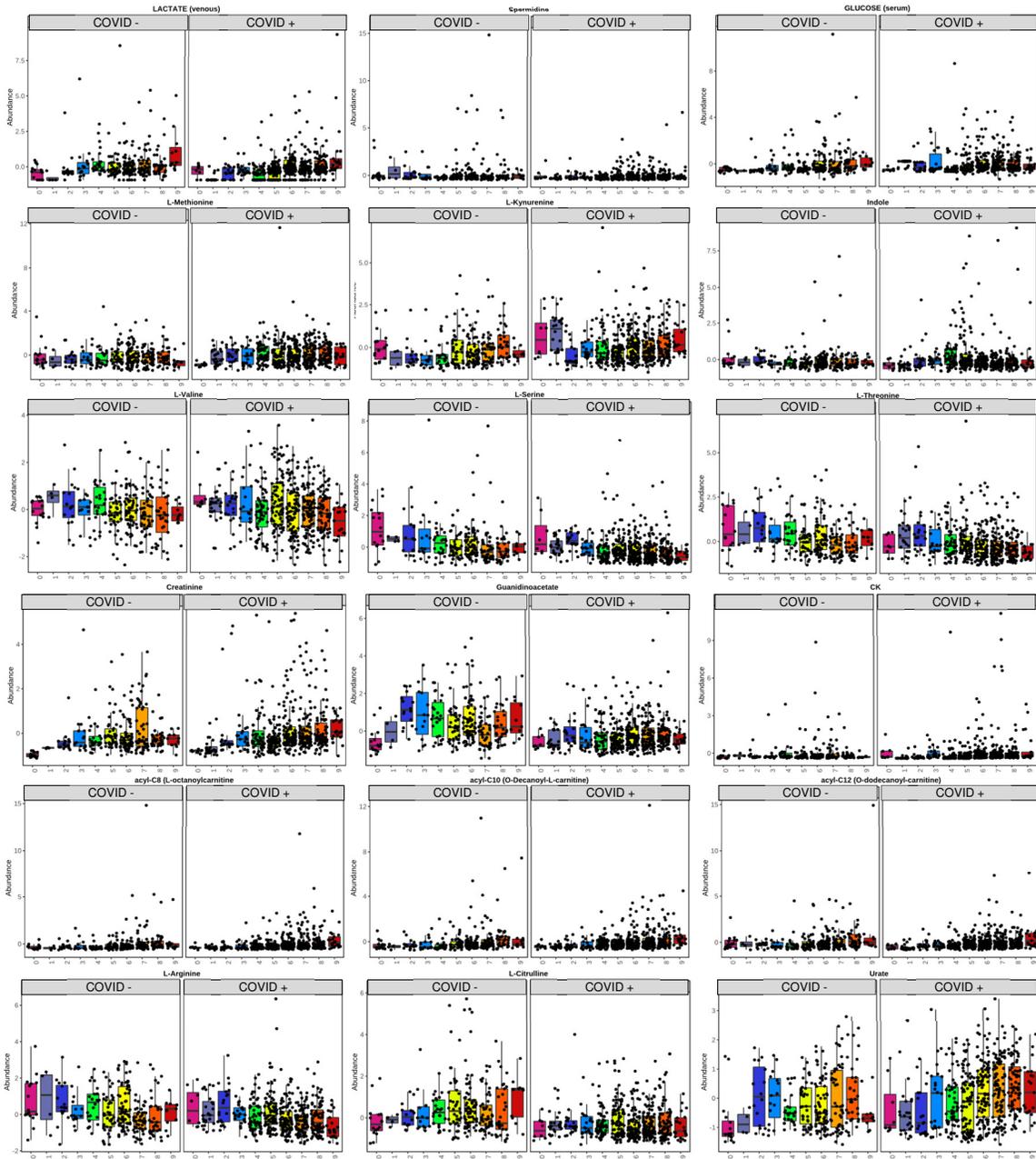
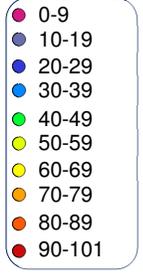
Supplementary Figure S2 – Markers of blood group in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA.

Impact of BMI



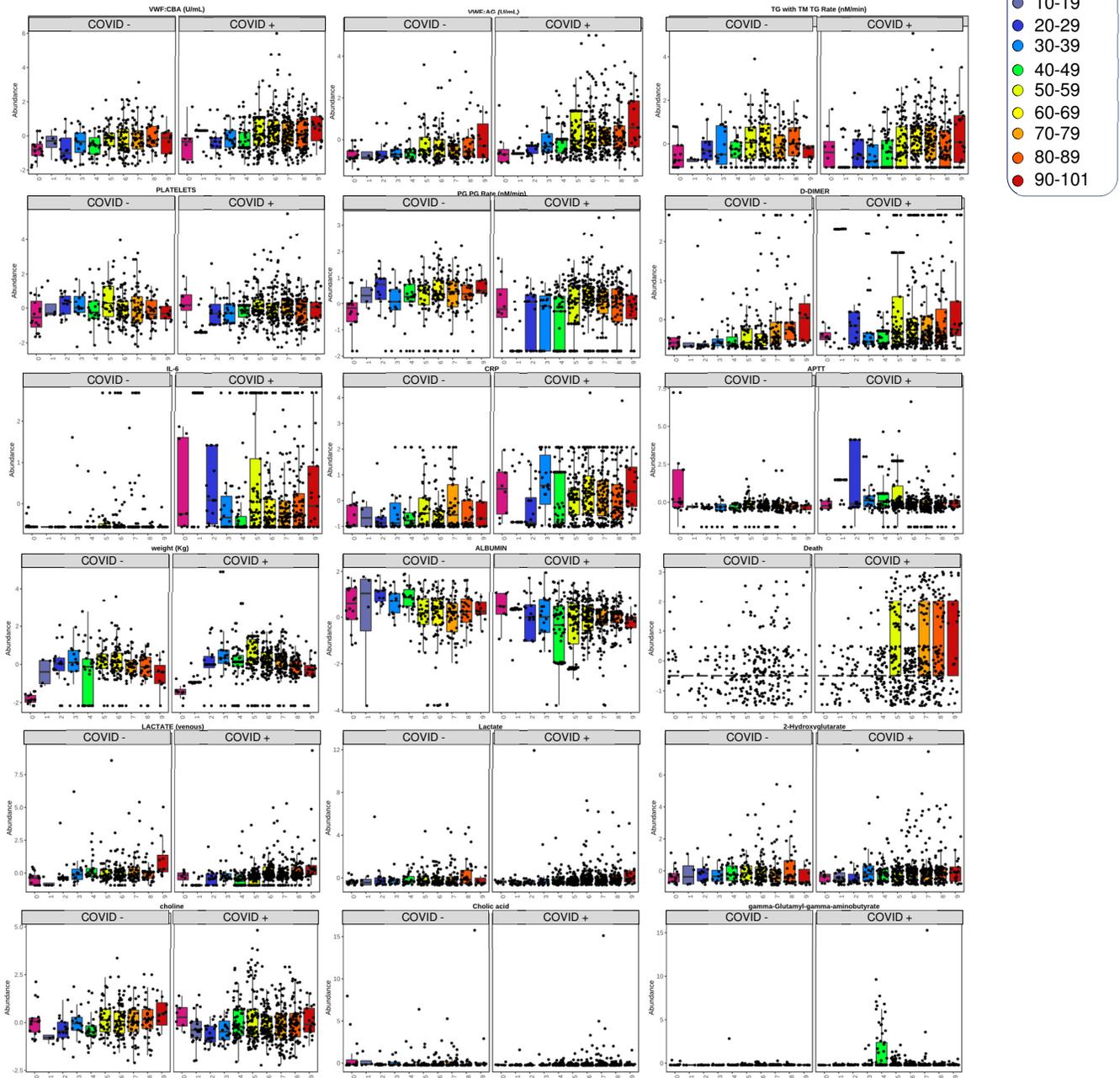
Supplementary Figure S3 – Markers of BMI in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA.

Impact of Age



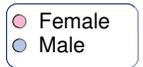
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Impact of Age



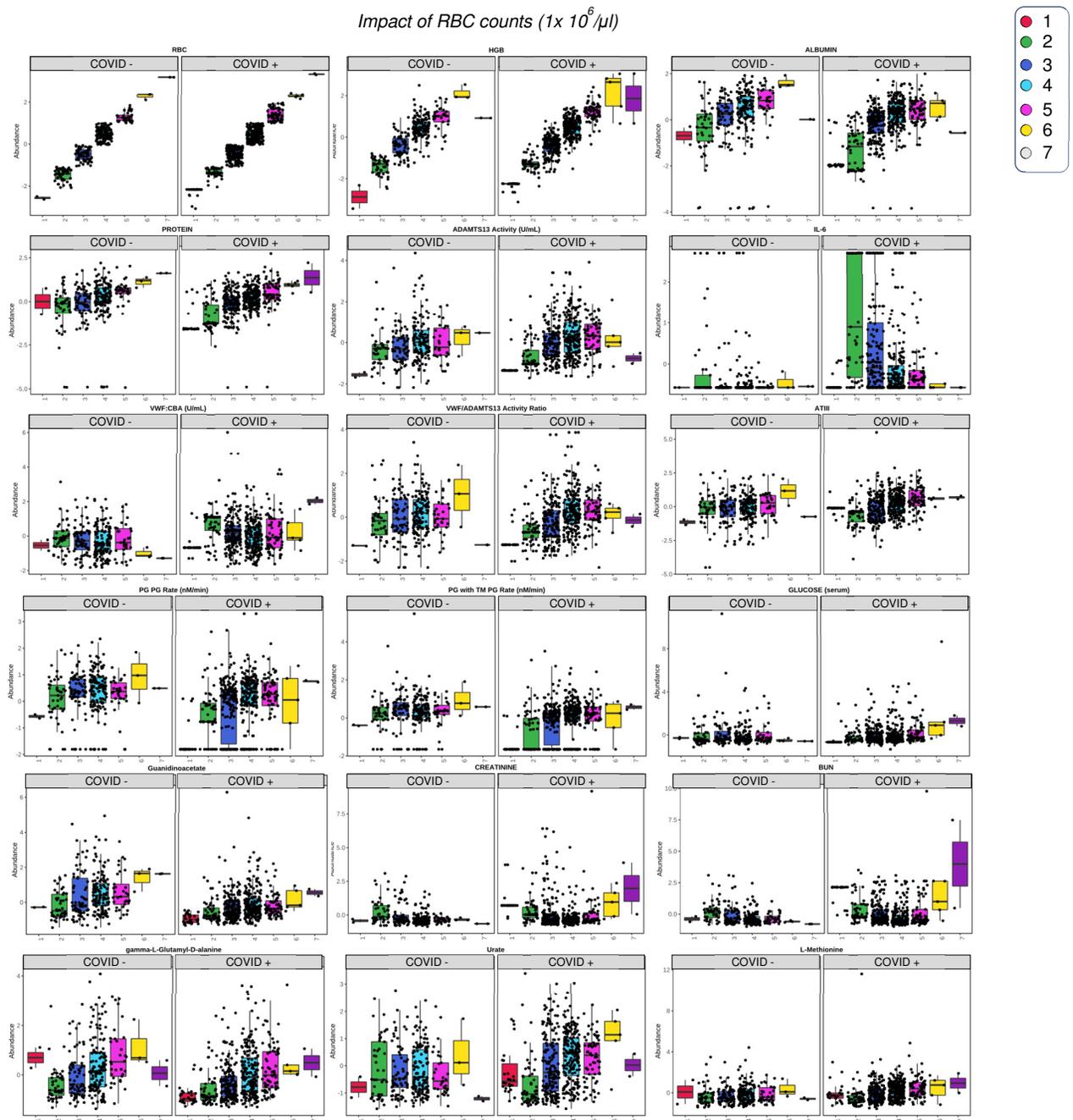
Supplementary Figure S4 – Markers of age in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA.

Impact of Sex



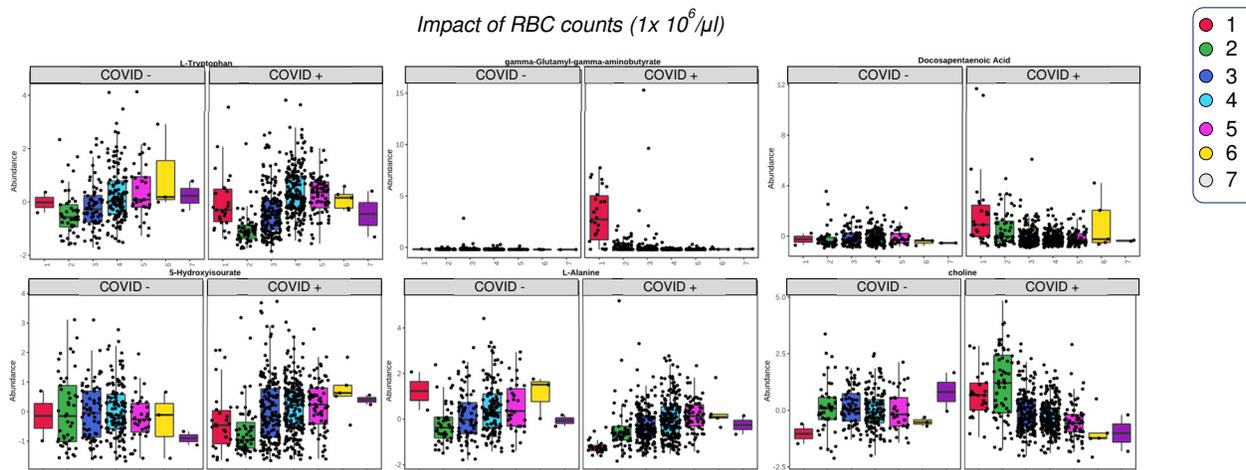
Supplementary Figure S5 – Markers of sex in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA (0 = female; 1 = male).

Impact of RBC counts ($1 \times 10^6 / \mu\text{l}$)



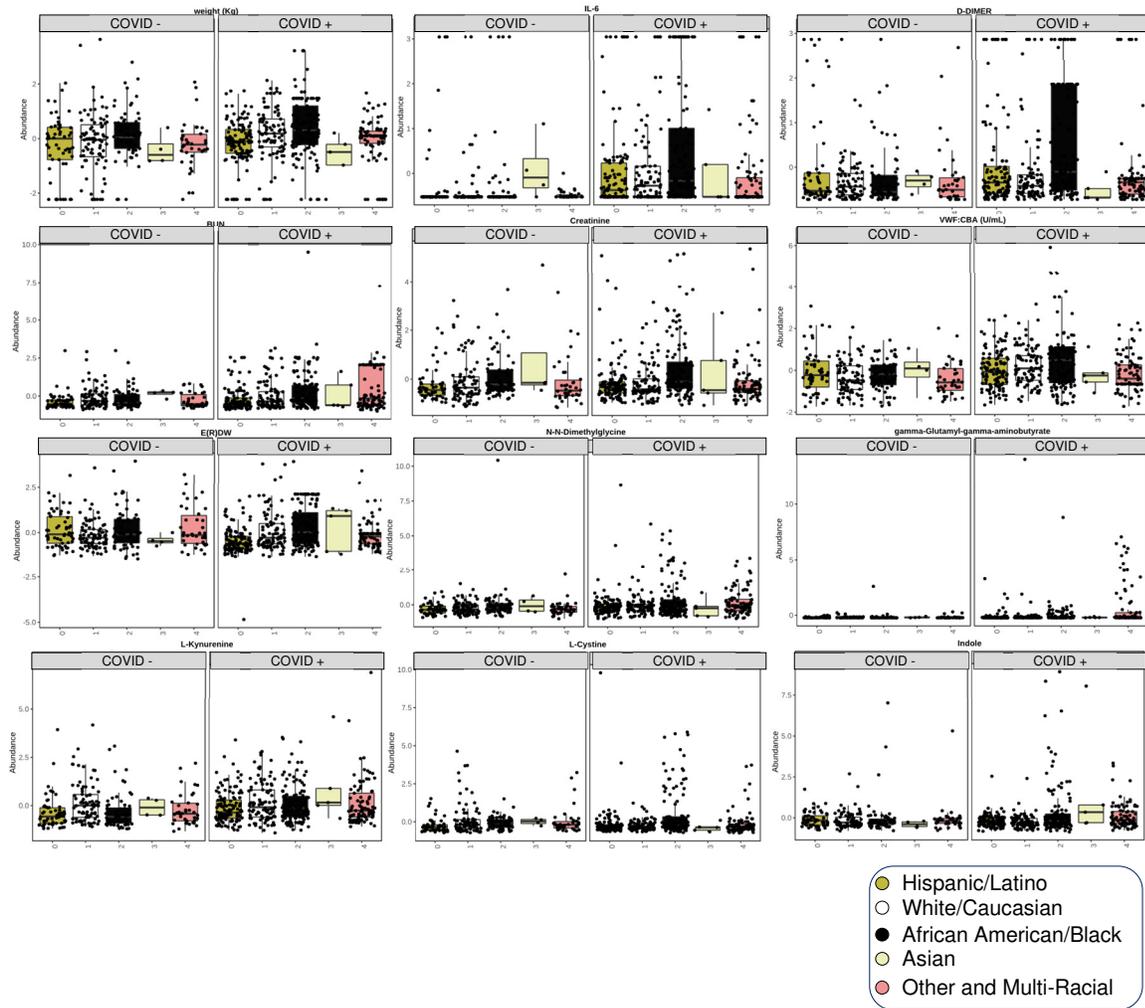
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Impact of RBC counts ($1 \times 10^6/\mu\text{l}$)



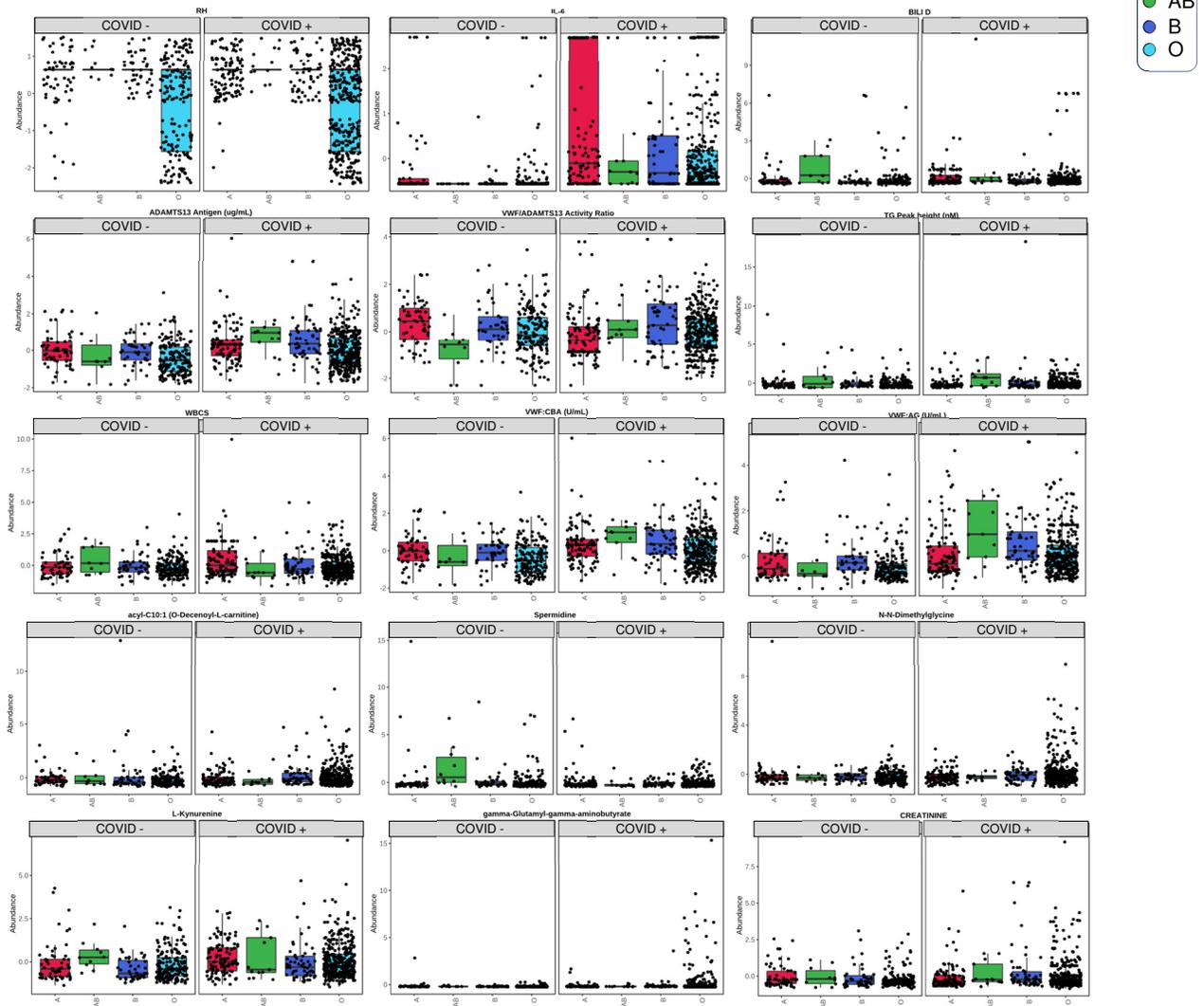
Supplementary Figure S6 – Markers of RBC counts in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA (numbers in the legend indicate RBC count in millions per microliter).

Impact of Race



Supplementary Figure S7 – Markers of race in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA.

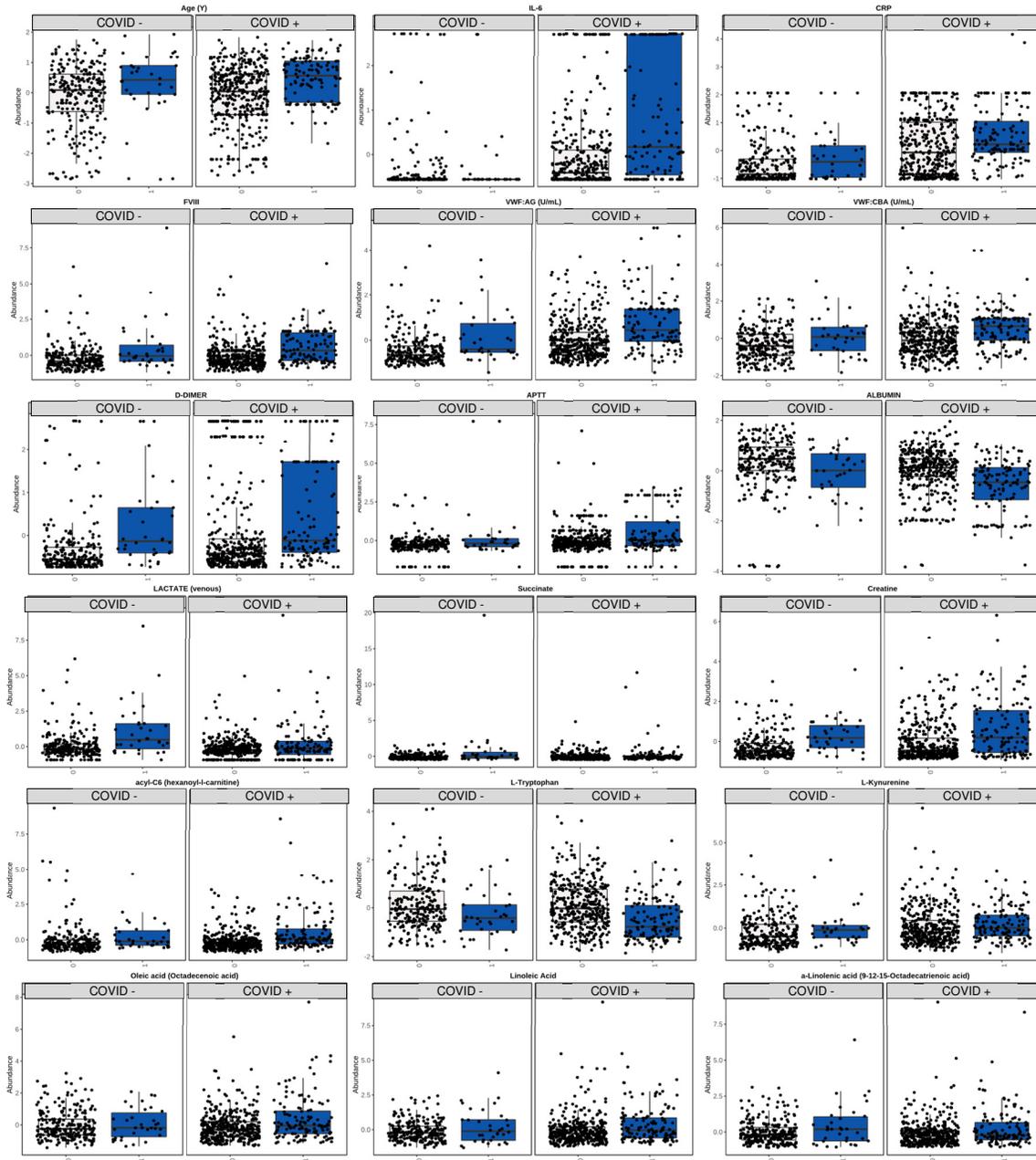
Impact of Blood Group



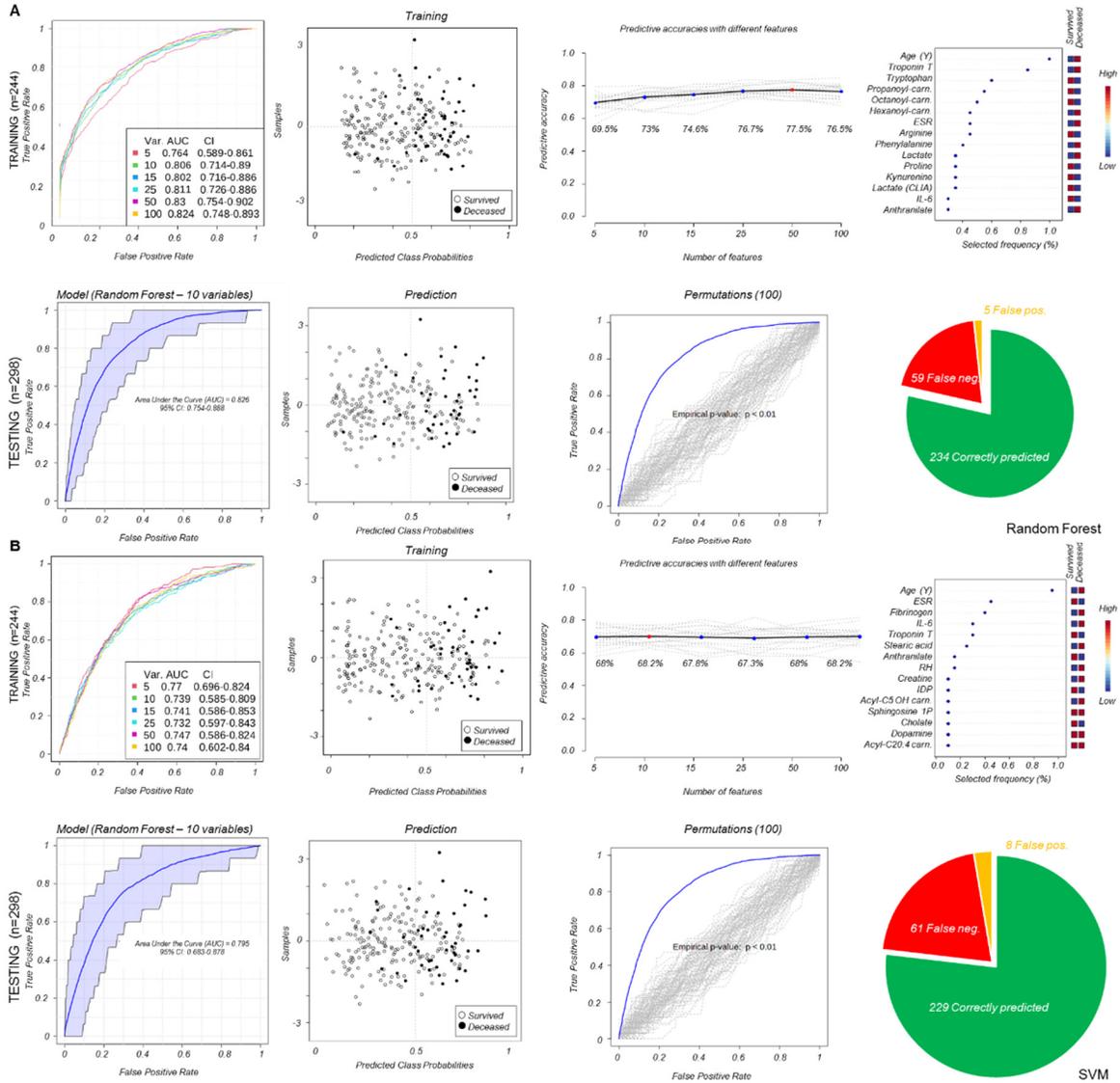
Supplementary Figure S8 – Markers of blood group in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA.

Markers of mortality

○ Survived
● Deceased

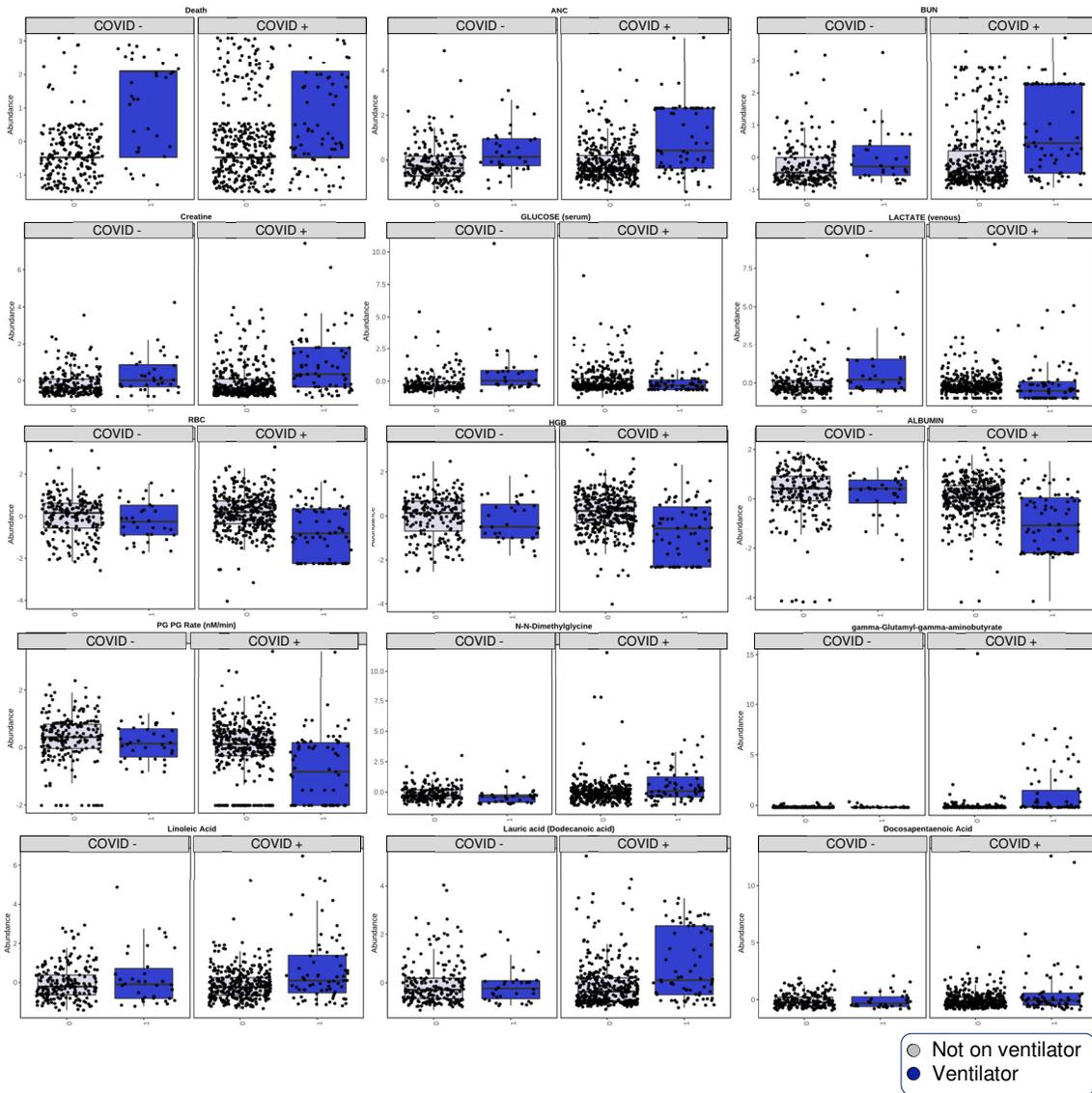


Supplementary Figure S9 – Markers of mortality in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA (0 = survived; 1 = dead).



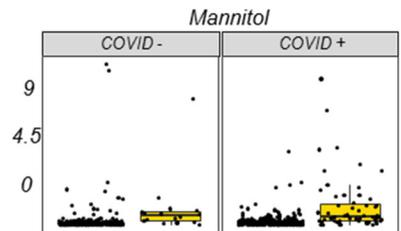
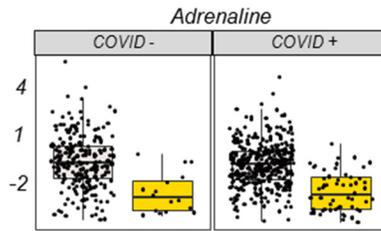
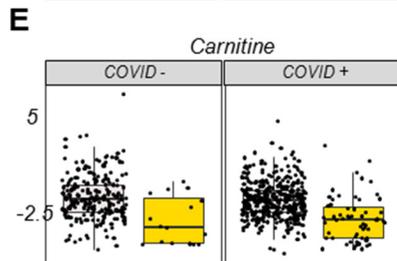
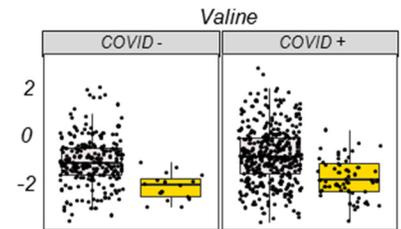
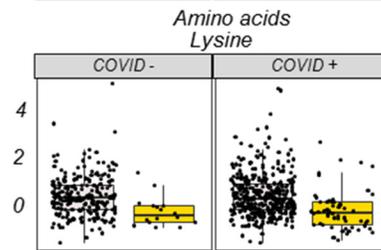
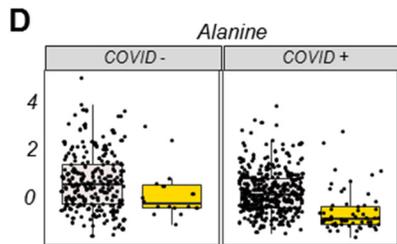
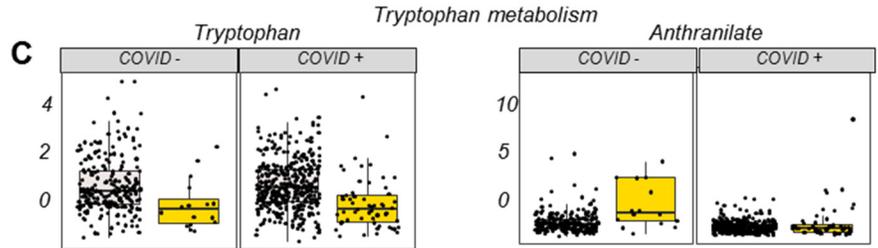
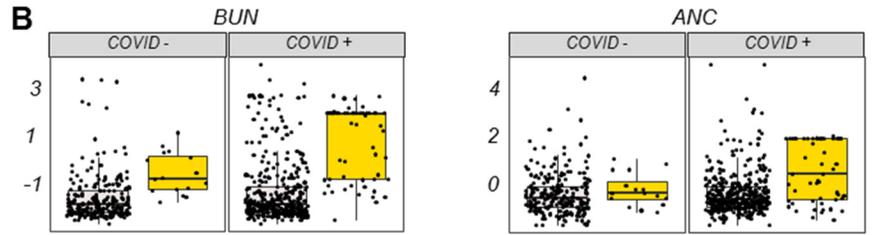
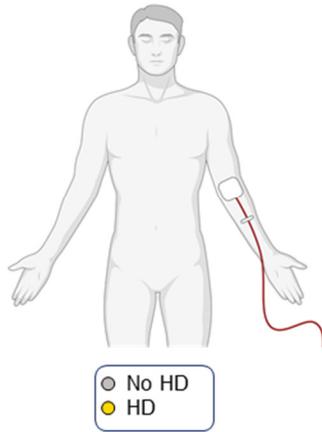
Supplementary Figure S10– Comparison of predictive models of mortality via Random Forest (A) and SVM (B) algorithms. Patients were curated for metabolomics, clinical, coagulation and inflammatory variables (total n = 542). The cohort was then divided in two groups, one for training (n = 244) and one for testing (n = 298) of the algorithm, which resulted to be ~78% and ~75% accurate, respectively.

Impact of being on ventilator

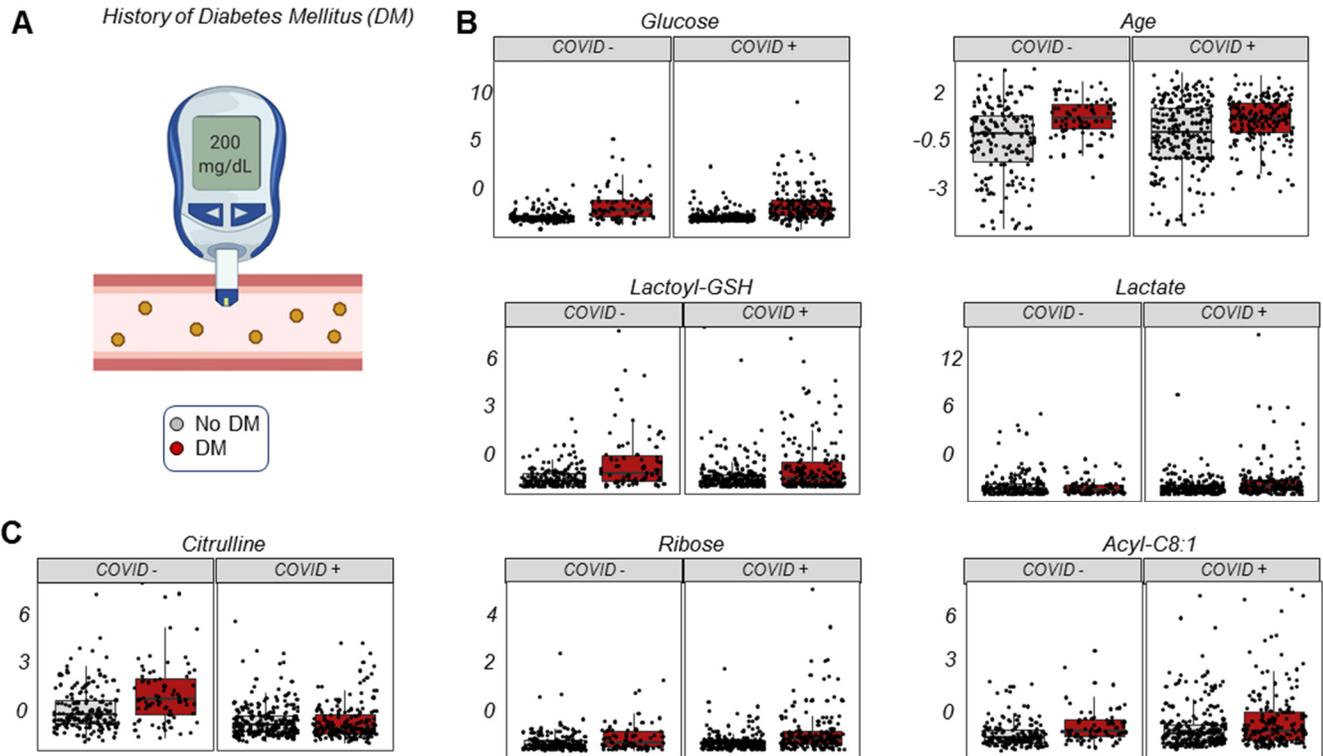


Supplementary Figure S11 – Markers of ventilators in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA (0 = not on ventilator; 1 = on ventilator).

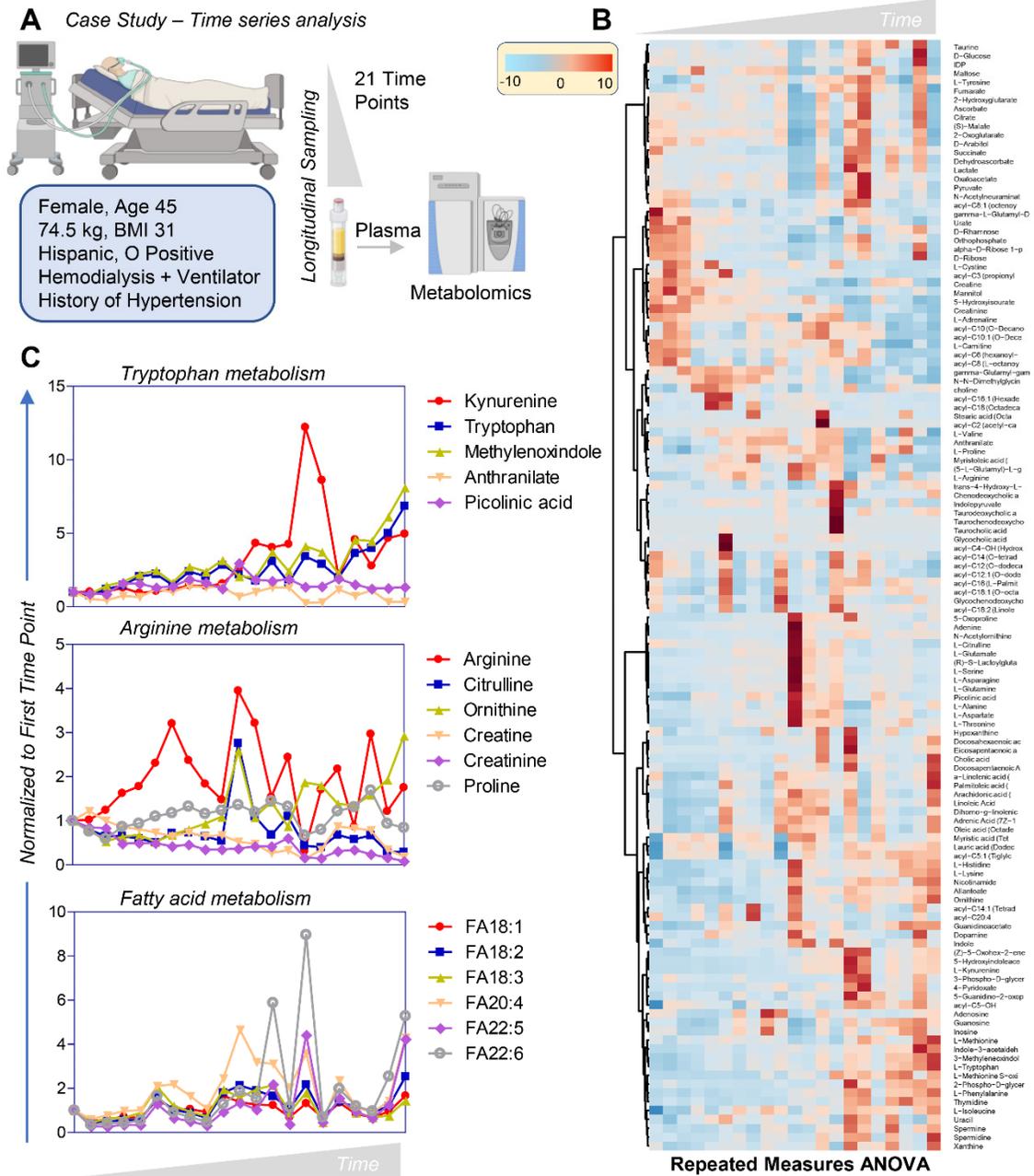
A Markers of Hemodialysis



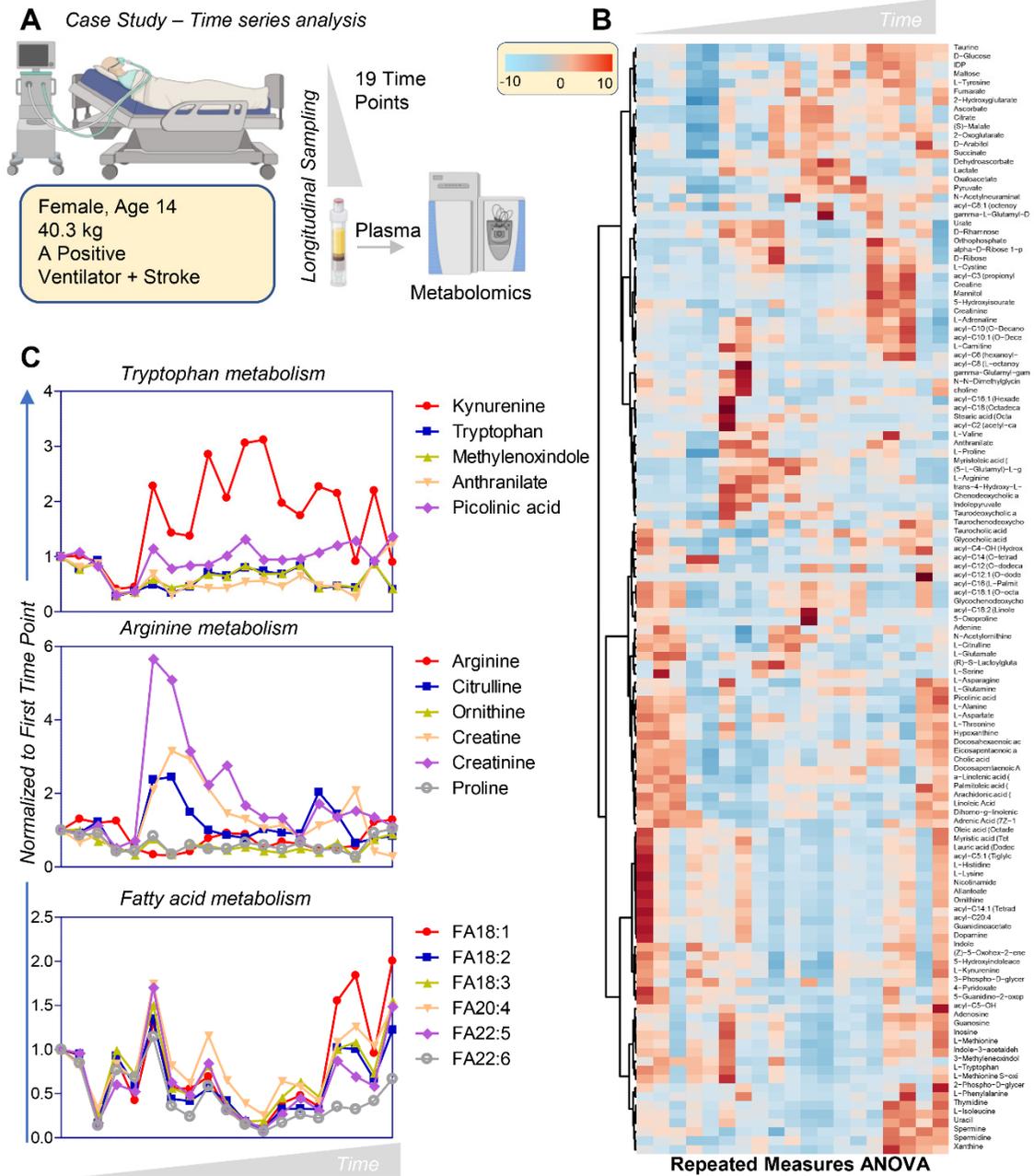
Supplementary Figure S12 – Markers of hemodialysis (without clotting) in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA (0 = no hemodialysis; 1 = on hemodialysis).



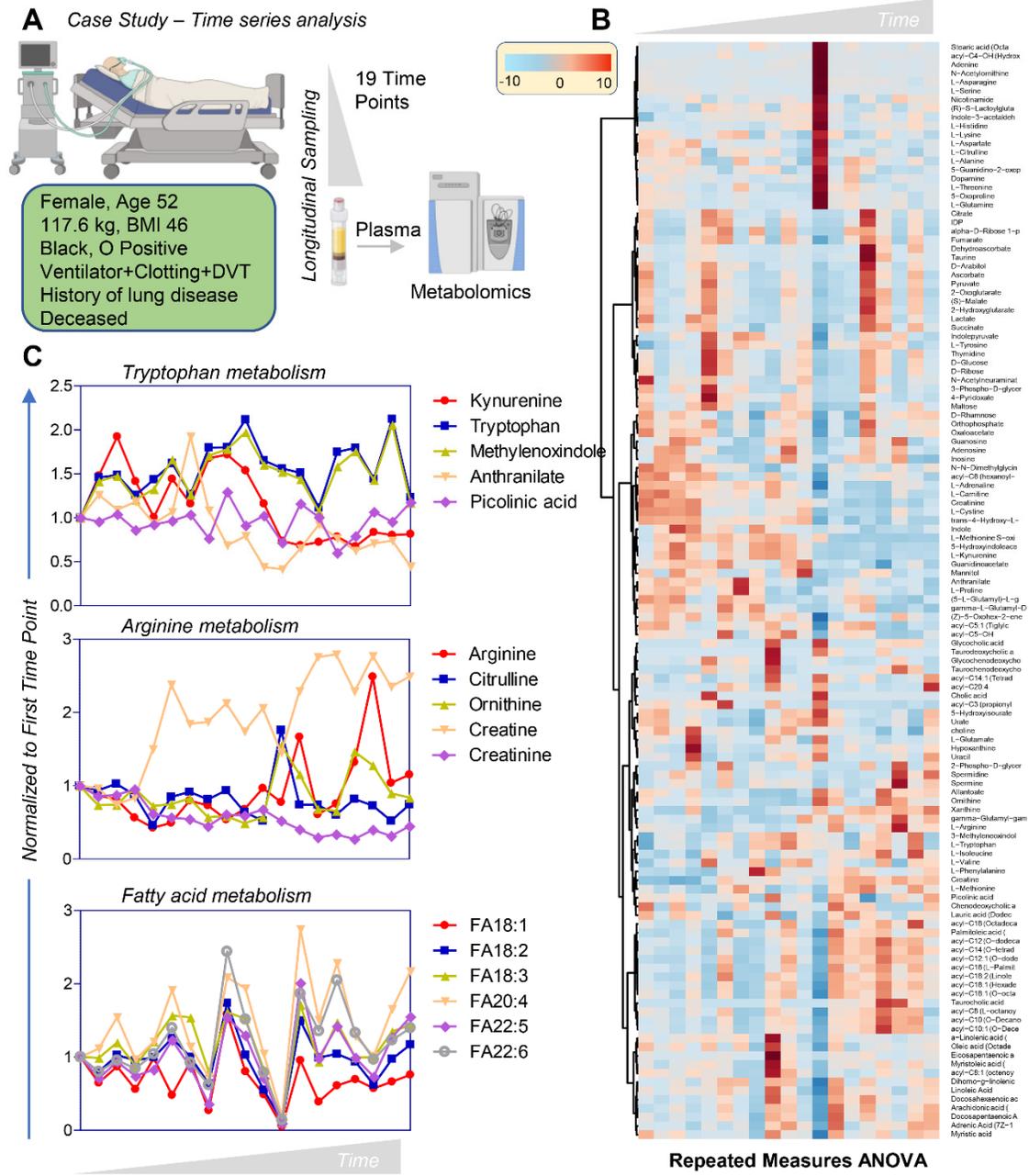
Supplementary Figure S13 – Impact of pre-existing conditions such as diabetes in COVID negative (-) and positive (+) patients, as determined by Two-way ANOVA (0 = no history of diabetes; 1 = diabetes).



Supplementary Figure S14 – Time course analysis of a critically ill patient who survived.



Supplementary Figure S15 – Time course analysis of a critically ill patient who survived (vectorial version of in manuscript figure).



Supplementary Figure S16 – Time course analysis of a critically ill patient who died (vectorial version of in manuscript figure).