Plasma Proteomics Reveal COVID-19 Associated Network and Severity Biomarkers

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Study population and Methods

The interaction between virus and host proteins can suggest prognostic biomarkers and therapeutic targets.

Plasma proteome of critical patients intrinsically clustered in a distinct group than severe and moderate ones

Cluster 1 ➔ Critical patients
- Innate immune system
- Neutrophil degranulation
- Binding of ligands by receptors

Cluster 2 ➔ Moderate and severe patients
- Complement cascade
- Hemostasis

Expression Profile of Early Infection of Critical Patients Gives Cues for Severity Biomarkers

Early Infection
MB, S100A9 and MST1 protein levels increased
CLEC3B and ITIH2 are decreased

Discussion and interpretation

- MST1 (expressed specifically in immune cells and plays an important role in the cytotoxicity of the cells)
- CLEC3B (diagnostic biomarker in lung cancer)
- ITIH2 (inter-alpha-trypsin inhibitor)

Early predictor of COVID-19 severity.

This study provides new potential early severity biomarkers for prognostic monitoring.

Acknowledgements: We thank to KUPAM, KUTTAM OMICS laboratories. This work was supported by Koc University İşBank Center for Infectious Diseases (KUISCID).