Background and Study Design

The novel SARS-CoV-2 infection on lung tissue and the host response may elucidate the heterogeneity observed in pulmonary disease manifestation and progression of COVID-19.

Alveolar tissue gene expression profiles are distinctly unique between COVID-19 lung tissue compared to healthy, ARDS alveolar lung tissue compared to COVID-19.

Only donor and intra-lung inflammation alters immune cell type presence in COVID-19 or ARDS alveolar tissue from COVID-19 (n=2), healthy (n=1), and ARDS (n=1) subjects.

Conclusions

A distinct inflammatory, immune cell, and epithelial cell response can be seen between mild/moderate and severe inflammatory states of COVID-19 (gene expression; panel A).

COVID-19 drives a unique tissue-associated cell type profile in ROIs with mild/moderate or severe inflammation compared to ROIs from healthy subjects (enriched cell types: panel B).

Acknowledgments/Disclaimers

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