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Supplementary appendix

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Supplement to: Dhawan R T, Gopalan D, Howard L, et al. Beyond the clot: perfusion imaging of the pulmonary vasculature after COVID-19. *Lancet Respir Med* 2020; published online November 17. http://dx.doi.org/10.1016/S2213-2600(20)30407-0.

Supplementary Appendix

Supplement to: Dhawan RT et al.

Beyond the clot Perfusion Imaging of the Pulmonary Vasculature after COVID-19

Supplementary Material

Supplementary Figure 1: Illustrative VQ SPECT-CT 3 plane tomography with lung CT overlay and fusion in a non COVID-19 patient

Supplementary Figure 2: Illustrative CTPA Imaging with Dual Energy CT Lung Perfusion, MRI Lung perfusion and planar lung perfusion ^{99m}Tc MAA Scintigraphy in a non COVID-19 patient.

Supplementary Figure 1



Supplementary Figure 1: VQ SPECT-CT 3 plane tomography with lung CT overlay and fusion. Classical findings in venous thrombo-embolism (non –COVID-19)

Top Row: ^{99m}Tc DTPA aerosol Ventilation SPECT-CT with uniform pattern of ventilation *Bottom Row:* ^{99m}Tc MAA Perfusion SPECT-CT with right lung dominant classical segmental perfusion defects and VQ mismatch. No significant parenchymal CT lung abnormality apart from minor nonbreathhold artefact. VQ = Ventilation Perfusion, SPECT-CT= Single-photon emission computed tomography with CT fusion, DTPA=diethylenetriamine pentacetic acid. MAA= Macroaggregated albumin.

Supplementary Figure 2



Supplementary Figure 2a Left image: **CT Pulmonary angiogram (CTPA) in a non-COVID-19 patient combined with DECT Lung Perfusion Map** shows intra-luminal thrombus in right lower lobe pulmonary artery (arrow and star) and segmental branch vessels (on CTPA) with multi-segmental large perfusion deficit (dark lung) on DECT perfusion map, concordant with territory of luminal thrombus.

Supplementary Figure 2b Middle Image: MRI Lung perfusion with perfusion defects (dark areas marked with white arrows)

Supplementary Figure 2c Right sided image: Planar ^{99m}Tc MAA planar scintigraphy with unresolved concordant perfusion defect at 6 months follow-up in the right upper, mid and left mid zones (blue arrows)

VQ = Ventilation Perfusion, DECT= Dual Energy CT, SPECT-CT= Single-photon emission computed tomography with CT fusion, MAA= Macroaggregated albumin.