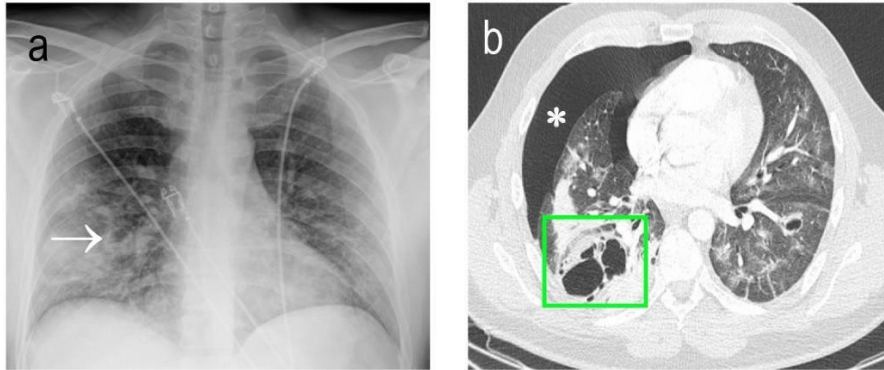**Supplementary Figure 1. Initial imaging.**


Supplementary Figure 1. Initial imaging. S1a. CXR on 4/21/2020 demonstrating basilar predominant bilateral airspace disease (right greater than left) consistent with viral pneumonia. Cavitary change is apparent on the right (arrow). Note, no pneumothorax is present. **S1b.** Axial section of CTA chest on 4/22/2020 demonstrating large right pneumothorax (asterisk) and a RLL cavitary lesion (green box).

Supplementary Figure 2. Catheter thoracostomy treatment.
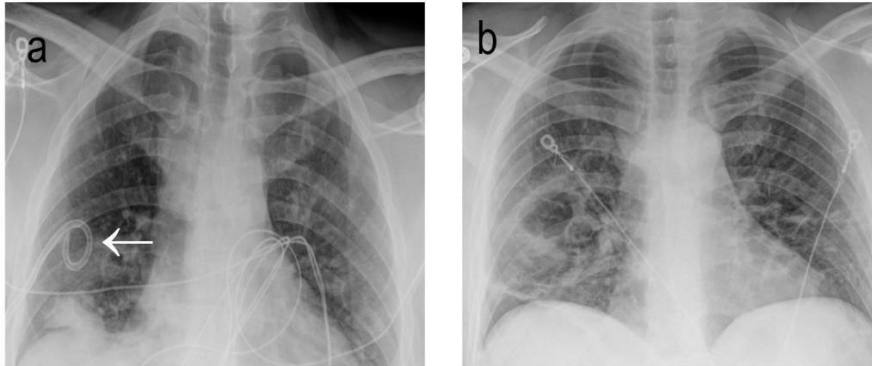

Supplementary Figure 2. Catheter thoracostomy treatment. S2a. Resolution of PTX with 14 Fr. Pigtail catheter thoracostomy (arrow). **S2b.** CXR demonstrating well-expanded right lung after thoracostomy tube removal.

Supplementary Figure 3. RUL cavitary lesion.
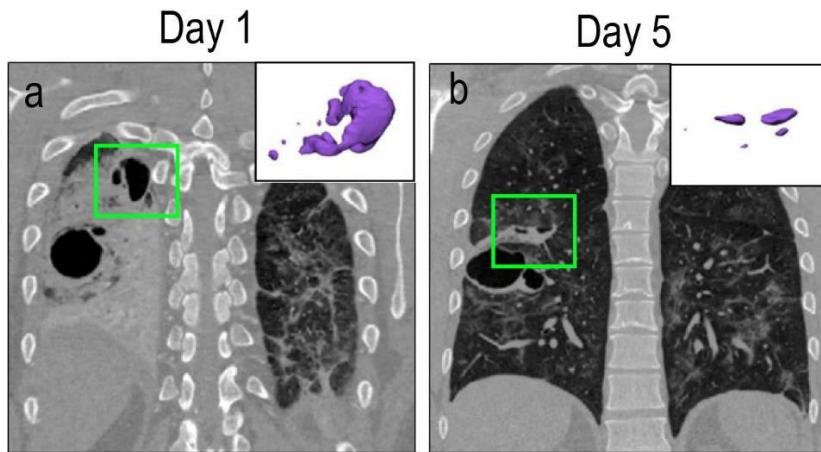
Supplementary Figure 3. RUL cavitary lesion. S3a. Coronal section of CTA chest 4/22/2020 (Day 1) demonstrating a complex RUL cavitary lesion (green box, 3D model inset). **S3b.** Coronal section of CTA chest on 4/27/2020 (Day 5) demonstrating decreased size of the RUL cavity (green box) and corresponding 3D model of the cavity (purple, inset).

Supplementary Figure 4. Interval CT imaging, Day 54.
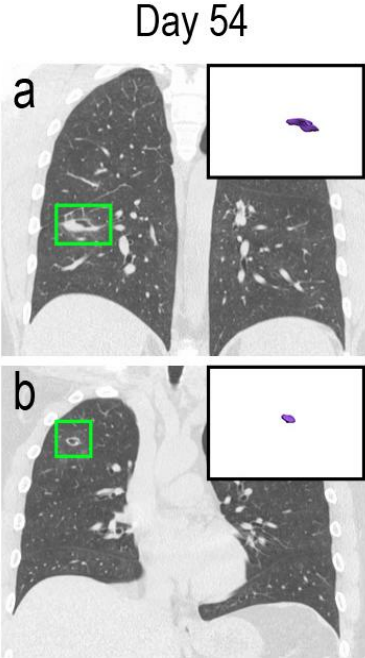
Supplementary Figure 4.   4a. CT thorax Day 54: Ongoing resolution of RLL cavity. **4b.** CT thorax Day 54: Small RUL cavity and 3D model. Note: Green boxes indicate cavities. 3D models (purple) are scaled for comparison between panels.

Supplementary Figure 5. Pulmonary Function Testing

Pulmonary Function Parameters Measured

	LLN	Pred	Baseline	%Pred
FVC	4.89	6.10	5.49	90
FEV1	3.90	4.91	4.56	93
FEV1/FVC	70	81	83	
PEF	8.58	11.17	10.22	91
FEF 25/75	2.84	4.73	4.48	95
FET			8.46	
V backextrap.			0.12	
SVC	4.89	6.10	5.49	90
IC		4.21	3.85	91
ERV		1.62	1.64	101
RV	1.33	2.00	1.70	85
FRCpl	2.64	3.62	3.34	92
TLC	6.79	7.94	7.18	91
RV%TLC	19	28	24	86
RAW .71-2.60			2.38	
GAW .38-1.4			0.42	
sGAW >.10			0.13	
DLCO SB	28.03	35.83	33.68	94
DL/VA	3.72	4.71	5.31	113
VA SB	6.27	7.66	6.34	83
IVC_SB	4.91	5.84	5.28	91
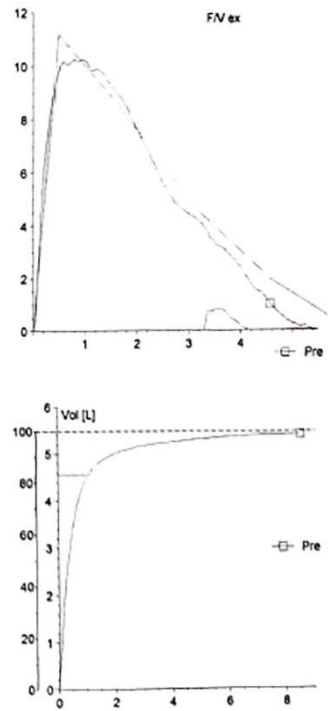
Supplementary Figure 5. Pulmonary Function Testing. Convalescent pulmonary function testing was obtained on June 16, 2020. There is no pulmonary function testing prior to the COVID-19 infection.

Supplementary Table 1. Basic laboratory values

Test	Outcome
White blood cell count	8.6
Hemoglobin	15.7
Platelet count	268
Sodium	139
Potassium	3.9
Blood urea nitrogen	14
Creatinine	1.01
Glucose	93
Magnesium	1.9
Phosphate	2.5
Lactate	2.1 (normal <2)
Troponin	0.01 (normal <0.03 ng/mL)
Procalcitonin	0.03 (normal <0.25 ng/mL)
C-reactive protein	2.6 (normal 0.0-1.0 mg/dL)

Supplementary Table 1. Basic laboratory values. Basic laboratory evaluation on April 22nd, 2020 was unremarkable. Notably, there was no leukocytosis and the procalcitonin was normal.

Supplementary Table 2. Cavity Volumes

Date of CT chest	Cavitary Lesion	Volume (mm^3)
4/22/2020	RLL	20479
4/22/2020	RUL	6816
4/22/2020	LLL	402
4/27/2020	RLL	30057
4/27/2020	RUL	941
4/27/2020	LLL	125
5/27/2020	RLL	1618
6/15/2020	RLL	135
6/15/2020	RUL	34

Supplementary Table 2. Cavity volumes. 3D models of the cavities were generated using Mimics; 3-matic; Materialise (Leuven, Belgium) software and cavity volumes (mm^3) were measured.