

Success During COVID-19

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Dignity Health[™]
**Norton Thoracic
Institute**

Recipient History

- Self-Referral
- 63 y/o Caucasian male
- First noticed symptoms in 2016
- February 2020 patient was hospitalized with bilateral pneumonia
- CT Chest and Chest X-ray showed diagnosis of Idiopathic Pulmonary Fibrosis (IPF); probable Usual Interstitial Pneumonitis (UIP)
- Discharged on oxygen, and underwent transplant evaluation at a transplant center in his home state

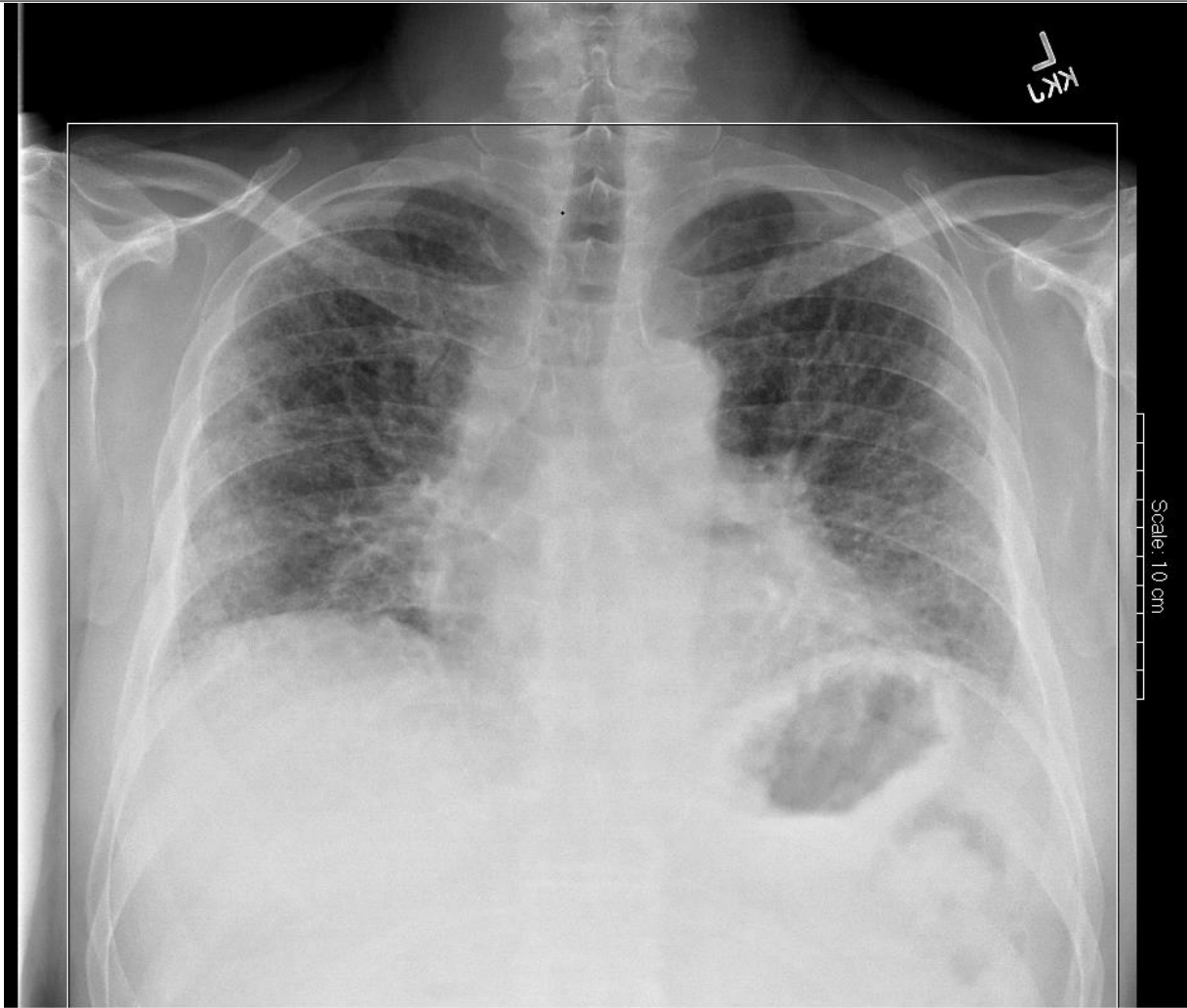
Recipient History

- Consult visit July 2020
 - 3lpm oxygen at rest and 6lpm oxygen with activity
 - Still able to perform ADL's, but much more slowly
 - Difficulty climbing stairs in his home
 - Work History: Retired Marine (flight engineer); significant for exposure to oil, oil fume leaks, chemicals, wood dust and mold
 - Past Medical History: GERD, NIDDM
 - Past Surgical History: knee surgery
 - Social History: Never a smoker, ETOH 1x/month, never used drugs

International Society for Heart and Lung Transplant Criteria for Listing for IPF

- Decline in FVC >10% during 6 months follow-up
- Decline in DLCO >15% during 6 months follow-up
- Desaturation to 88% or distance < 250 meters on 6 minute walk test OR >50 meter decline in 6 minute walk distance over a 6-month period
- Pulmonary hypertension on right heart catheterization
- Hospitalization because of respiratory decline, pneumothorax, or acute exacerbation

Recipient History—Chest X-Ray



Recipient History-Pulmonary Function Tests

Date	FVC	FEV1	DLCO
08/31/2016	3.98 L (77%)	3.55 L (90%)	14.3 (49%)
08/01/2019	3.53 L (70%)	3.05 L (80%)	20.7 (57%)
02/18/2020	2.55 L (51%)	2.27 L (60%)	4.6 (13%)
07/07/2020	2.08 L (43%)	1.98 (54%)	8.48 (24%)

Recipient History

- 6 Minute Walk Study: Walked 330 meters on 6lpm nasal cannula and desaturated to 85 %
- ABG: pH 7.47; pCO₂ 35; PO₂ 128 (on 3lpm)
- Criteria met for transplant evaluation:
 - Dx. UIP via chest CT
 - Desaturation on 6MWS
 - Decline in FVC >10%
 - Change in DLCO > 15%

Transplant Evaluation

- Completed 07/28/2020
 - Now required 15lpm oxygen via nasal cannula
 - Evaluation did not reveal any significant medical or surgical concerns
 - Counselling on high risk donors
- Presented at Multidisciplinary Review Board on 07/31/2020 and approved to list
- Insurance Authorization received 08/06/2020, listed same day
- LAS 65.1

Donor Offer

- Donor Offer received from CAOP on 08/18/20 at 10:32AM
 - 20 year old male
 - Brain death
 - Trauma/MVA
 - No smoking history
 - Chest imaging clear
 - Bronchoscopy normal
 - PF Ratio: 417

Uh-Oh!

- Donor history was notable for COVID infection 3 months prior to brain death
 - No lingering affect of illness noted
- COVID diagnosis could not be confirmed with documentation of COVID test, or COVID Ab at time of organ offer
- Donor OR could not be delayed to confirm prior h/o COVID dx
 - COVID-PCR testing x 2 were negative
 - COVID Ab testing was performed on donor blood post donation and confirmed prior infection

Donor Evaluation

- Imaging and ABG were within acceptable parameters for our center
- No evidence of ground glass opacities or post-COVID fibrotic changes noted on imaging
- Multidisciplinary review of donor
 - Donor accepted for our recipient on 08/18/20 @12:07

Recipient Considerations

- Recipient consent prior to listing includes verbiage to allow physicians to accept or decline based on clinical judgment
- COVID-19 is not considered PHS criteria, therefore no high risk consent required
- Extended criteria donor, no specific consent required
- Recipient LAS was 65
 - recipient had significant increase in oxygen requirement
 - Recipient had decline in lung function
 - Donor activity had slowed due to COVID-19
 - Excellent donor for sick recipient

Patient Outcome

- Transplanted 08/19/2020
- Early PGD Grade 3, resolved by POD 3
- Extubated on POD 1
- Otherwise unremarkable post-transplant course

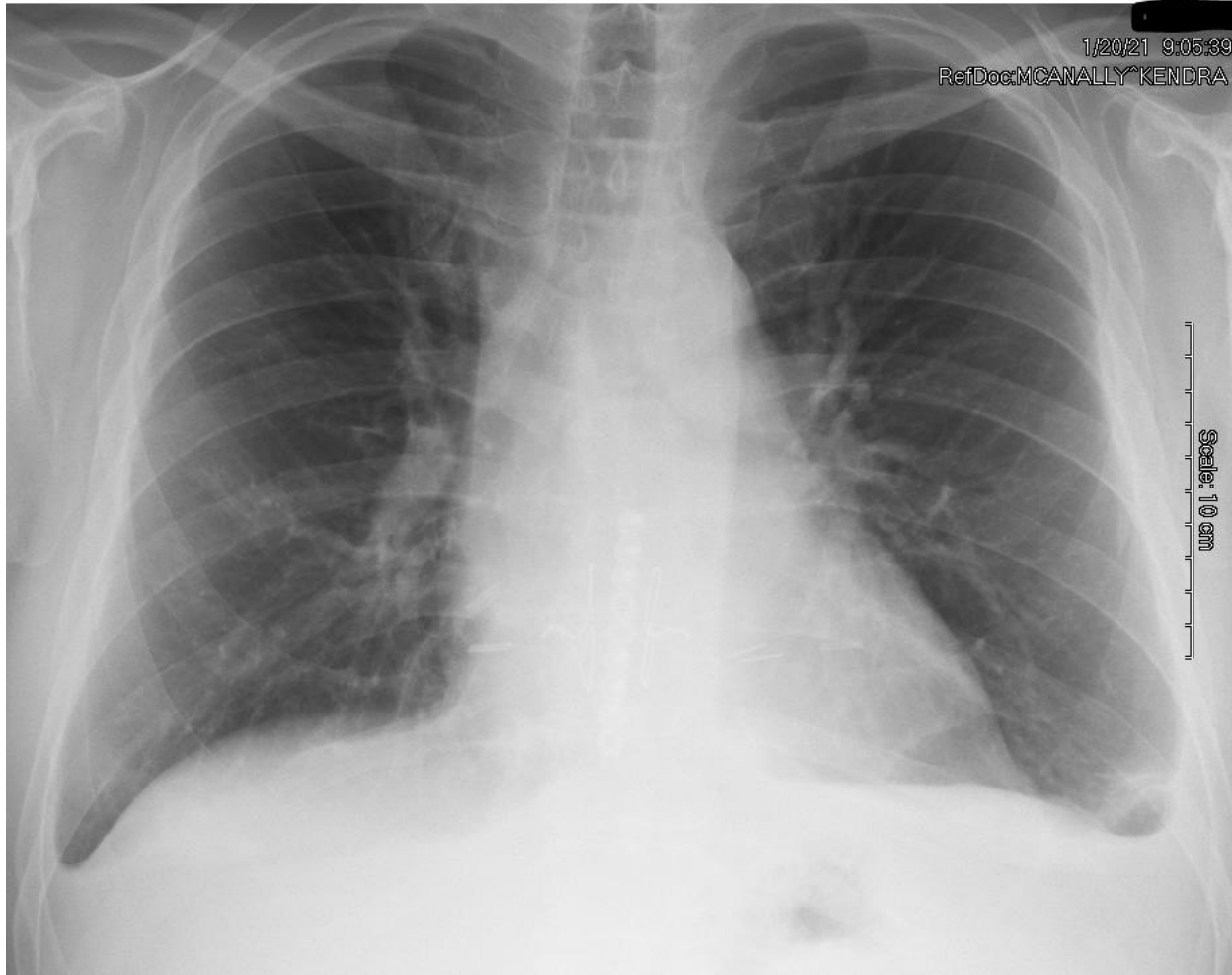


Day of Discharge

- Discharged on POD 8
- Liberated from Oxygen



Chest X-ray--6 Month Post Lung Transplant



Patient Outcome

- No episodes of rejection
- Lung function continues to improve
 - FVC 3.85 L (81%)
 - FEV1 3.60L (90%)
 - Liberated from oxygen



Thank You