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Demographics, pre transplant and peri operative variables	
Need for Desensitization	5 (24%)
ATG (mg/kg) used for Desensitization	3 [IQR(1.75-4)]
ECLS immediate post transplant	19 (90%)
VV ECMO	16 (76%)
VA ECMO	3 (14%)
No ECLS immediate post transplant	2 (9.5%)
PGD 3 at 72 hrs	4 (19%)
Return to OR Post Op	11 (52%)
Hemothorax	6 (50%)
Breast Hematoma Evacuation	1 (8%)
Sternal Fixation	1 (8%)
VA to VV ECMO Conversion	1 (8%)
RA thrombus resection	1 (8%)
Left Thumb amputation	1 (8%)
Exploratory Laparotomy	1 (8%)
Anastomotic Complication	1 (5%)
Clostridium difficile infection	4 (19%)
CMV Viremia	3 (14%)
Total number of days on ECMO	72 [IQR(60-92)]
Number of days on ECMO pre Transplant	67 [IQR(55-89)]
Number of Days on ECMO post transplant	3 [IQR(3-6)]
Post Op Immunosuppression	21 (100%)
Prednisone	20 (95%)
Tacrolimus	1 (5%)
Cyclosporine	18 (86%)
Mycophenolate	4 (19%)
mTOR inhibitor	2 (9.5%)
Belatacept	
Length of Stay Post Transplant	48 [IQR(28.5-73.5)]
Discharge to Local Housing	16 (76%)
Discharge to Acute Rehab Facility	5 (24%)
Readmission	11 (52%)
Post Transplant Short Term Follow Up	
FEV1 (liters) post transplant	2.14 [IQR(1.77-2.82)]
FVC (liters) post transplant	2.62 [IQR(2.08-3.28)]
Treated for Acute Cellular Rejection	4 (19%)
denovo DSA	8 (38%)
Treatment for Antibody Mediated Rejection	1 (5%)
Functional Graft	21 (100%)
Alive at the end of study period	21 (100%)
CKD Staging Post Transplant at the end of study period	9 (43%)
<3	6 (28%)
3a	5 (24%)
3b	1 (5%)
4	
Number of days of follow up available	234 [IQR(188-339)]
Number of patients completed one year	3 (14%)
Number of patients completed six months	18 (86%)

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### Safety, Reactogenicity and Patient Perceptions of COVID-19 Vaccination in Solid Organ Transplant Recipients at a Quaternary Referral Center

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**Purpose:** Solid organ transplant recipients (SOTR) are at high-risk for poor health outcomes following COVID-19. Several studies have evaluated the antibody response to the vaccine amongst SOTR, yet there is a

need to better understand peri-vaccination reactogenicity and patient behavior in SOTR. Our study reports the side effects, safety and the patient perceptions of the Pfizer vaccine amongst our center's SOTR.

**Methods:** In this single-center study, SOTR (heart, kidney, liver, lung, combined) who received the Pfizer (BNT162b2) vaccine in February-March 2021 completed an online survey about their side effects (SE) after the first and second dose of the vaccine, co-morbidities, masking behaviors, breakthrough infection, and perceptions regarding sense of protection and safety after vaccination. Descriptive and logistical regression analyses were performed.

**Results:** The survey was sent to 550 SOTR, of which 210 SOTR completed it thus far. Median age is 62 years, 154 (72%) are males and 61 (28%) are females. 81 (39%) experienced SE after both doses. After dose one, 53% patients experienced a SE, the most common being injection site pain (79%). After dose two, 53% patients experienced a SE, including injection site pain (61%) followed by systemic SE (39%). No patient hospitalization after either dose was reported. Within a 6-month period post vaccination, only 1 patient tested positive for COVID-19 after the first dose. Increased age reduced the risk for SE for both first and second doses (0.95 (0.92-0.97),  $p < 0.001$  and 0.96 (0.94-0.99),  $p < 0.002$ ). SOTR without diabetes had a significant increase in injection site pain (1.92 (1.05-3.49),  $p = 0.033$ ). For masking behaviors, 83% plan to continue masking in healthcare settings while 10% will no longer mask in any setting. Regarding sense of worry of receiving the vaccine, 66% did not feel worried while 10% felt very worried. After vaccination, 53% felt very protected while 15% did not feel protected at all.

**Conclusion:** In SOTR who received the Pfizer vaccine, 39% of patients reported side effects after both doses. Injection site pain was most common after first dose and systemic side effects were more after the second dose. The study reinforces the safety profile of the vaccine and SOTR with reactogenicity similar to other studies. Even after vaccination, majority of SOTR plan to wear masks in various settings.

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### Cardiac Disease Increased Risk of Death and Early Comorbidities Impacting Prognosis of Lung Transplant Recipients with Extreme Ages

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**Purpose:** Current organ allocation rules prioritized aged patients on the lung transplantation waiting list. Optimizing decision-making algorithms to evaluate candidates, transplant and minimize morbidity, has become the goal of lung transplant programs worldwide.

**Methods:** This was a retrospective cohort study recruiting patients who underwent lung transplantation, between January 2016 and October 2020, at Wuxi Lung Transplant Center. **The transplanted organs were obtained from volunteer donations, and the next of kin voluntarily provided written informed consent. No lungs were obtained from executed prisoners.**

**Results:** Among the entire study cohort of 166 lung transplant recipients aged  $\geq 65$  years, subgroups of aged 65-70 years (111 recipients, Group 65-70) and  $\geq 70$  years (55 recipients, Group  $\geq 70$ ) were included. Group D restrictive lung disease was the main indication of recipients  $\geq 65$  years, followed. We found significantly higher percentage of coronary artery stenosis (mid-to severe) in the Group  $\geq 70$  (30.9% vs. 14.4%). Further, we found valve structural abnormality in both groups, ranging from 8.1% to 16.4%, including medium to severe valve stenosis or regurgitation. ECMO bridging to LT was performed in 5.4% (Group 65-70) and 7.3% (Group  $\geq 70$ ). The average cold ischemic time was 434.6 minutes in Group 65-70 and 395.9 minutes in Group  $\geq 70$ , over 6.5 hours. We did more single left lateral lung transplantation in Group  $\geq 70$  patients mainly consisted of pulmonary fibrosis. Significantly higher occurrence rate of acute rejection, cardiac arrhythmia, pleural effusion were observed in Group  $\geq 70$ . Subjects with cardiac abnormality had significantly increased risk of mortality compared to those without cardiac abnormality (Figure 1).

**Conclusion:** Our experience from the largest aged lung transplant recipients cohort in eastern population, supported that lung transplantation can be performed in candidates with advanced chronological age and provided life-extending benefits.