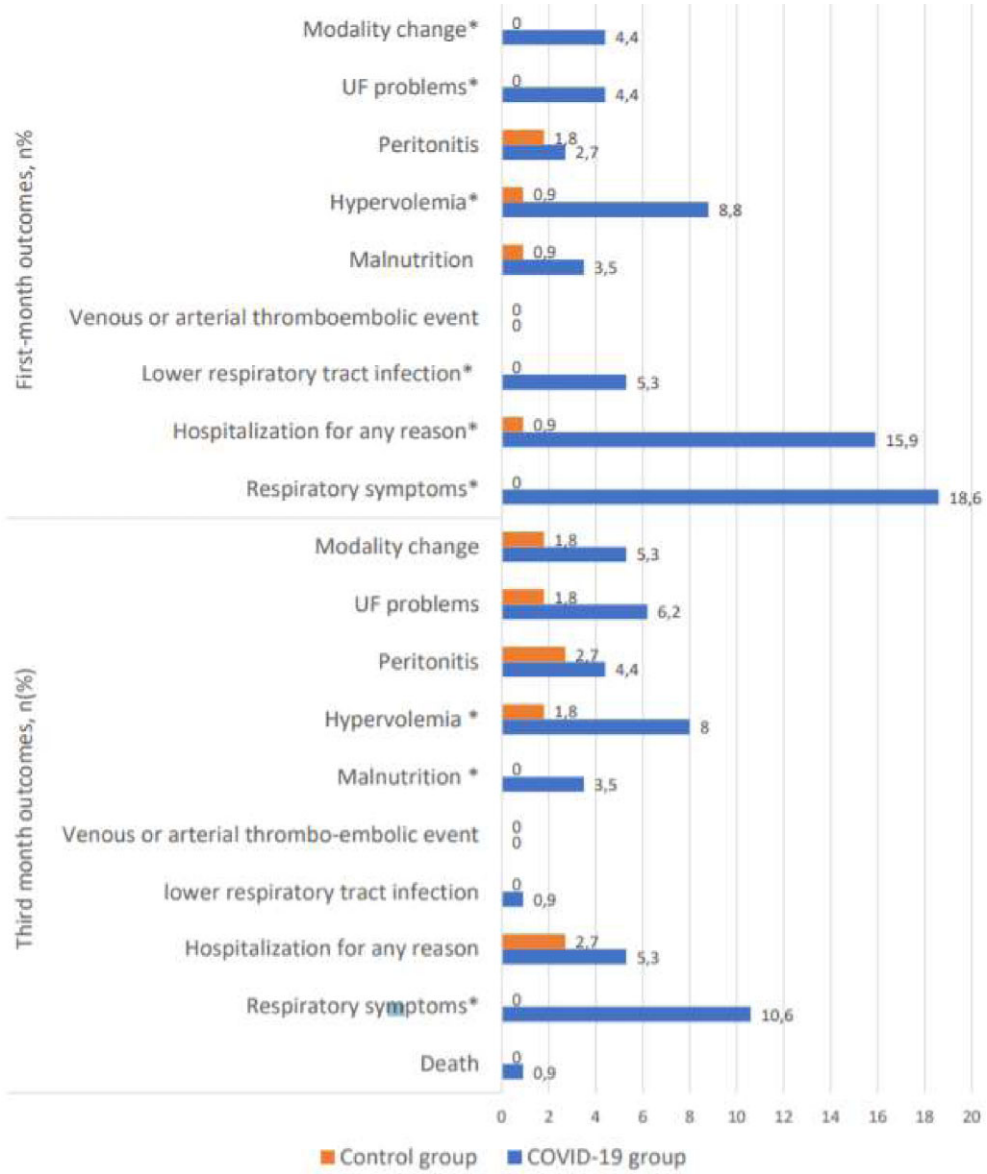

FIGURE 1: The clinical outcomes obtained at the first and third months compared by groups (*P < 0.05).

years, P < 0.001]. PD characteristics and baseline laboratory data were similar in both groups, except serum albumin and hemoglobin levels on Day 28, which were significantly lower in the COVID-19 group. In the COVID-19 group, respiratory symptoms, rehospitalization, lower respiratory tract infection, change in PD modality, UF failure and hypervolemia were significantly higher on the 28th day. There was no significant difference in laboratory parameters at Day 90. Only one (0.9%) patient in the COVID-19 group died within 90 days. There was no death in the control group. Respiratory symptoms, malnutrition and hypervolemia were significantly higher at Day 90 in the COVID-19 group.

CONCLUSION: Mortality in the first 90 days after COVID-19 in PD patients with COVID-19 is not different from the control PD group. However, some of these patients continue to experience significant problems, especially respiratory system symptoms, malnutrition, and hypervolemia.

MO699 INVESTIGATING LONGER TERM ANTIBODY RESPONSE FOLLOWING COVID-19 VACCINATION IN PATIENTS RECEIVING PERITONEAL DIALYSIS—A SINGLE-CENTER OBSERVATIONAL STUDY

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BACKGROUND AND AIMS: Individuals with end-stage kidney disease (ESKD) have a greater susceptibility towards coronavirus disease 2019 (COVID-19) infection compared to those without chronic kidney disease or ESKD, and these patients are more vulnerable to poor clinical outcomes. The introduction of COVID-19 vaccination programs displayed efficacy to improving clinical outcomes. A study based in the UK reported excellent humoral responses to the Pfizer BNT162b2 vaccine, but suboptimal responses to the Oxford AstraZeneca ChAdOx1-nCoV-19(AZD1222) vaccine amongst hemodialysis patients. High rate of humoral responses to two doses of the COVID-19 vaccination has been reported within small cohorts of peritoneal dialysis (PD) patients 3 to 8 weeks post vaccination, whilst one study confirmed maintenance of significant humoral responses 6 months post vaccination with the Pfizer BNT162b2 vaccine. Our study aimed at evaluating longer-term antibody responses—6 months after a two-dose regimen of the Pfizer BNT162b2 and Oxford AstraZeneca ChAdOx1-nCoV-19 (AZD1222) vaccines in patients receiving PD.

METHOD: This is a single-center observational study conducted for PD patients who were offered both doses of the COVID-19 vaccine [either Pfizer BNT162b2 or Oxford AstraZeneca ChAdOx1-nCoV-19(AZD1222)] since universal introduction of the vaccination program in our local area in December 2020. COVID-19 antibody testing was performed using the Siemens' immunoassay targeting the spike protein S1 RBD (an index ≥ 1.0 was deemed as a positive result) between October and November 2021. Demographic and baseline clinical data were collected for each patient, and analysis focused on comparing the characteristics between PD patients with positive

Baseline demographic and clinical characteristics of the sample population	
Total patients	86
Age, years	62 (47-71)
Ethnicity (Caucasian)	65 (75.6%)
Gender, Male	53 (61.6%)
Diabetes Mellitus	29 (33.7%)
Hypertension	73 (84.8%)
Cardiovascular disease	33 (38.4%)
Cancer	3 (3.5%)
Previous kidney transplant	10 (11.6%)
Immunosuppression Current Previous None	 7 (8.2%) 15 (17.4%) 65 (75.6%)
Vaccination status at Oct 2021 Received first vaccination Received two vaccinations Refused vaccination/unknown	 81 81 5
Vaccination type (of the 81 vaccinated) Pfizer BNT162b2 Oxford AstraZeneca Other	 57 (70.4%) 16 (19.7%) 8 (9.9%)
Antibody test (done only in 72 patients) Positive Negative	 68 (94.4%) 4 (5.6%)

and negative COVID-19 antibody statuses. Statistical analysis was performed using SPSS version 24.

RESULTS: Eighty-six patients were included in this study. The median age was 62 years (47–71) with a predominance of males (61.6%) and Caucasian ethnicity (75.6%). The majority of patients have hypertension (84.8%) with 38% having a history of cardiovascular disease and 34% being diabetic. Ten patients (11.6%) previously received a kidney transplant with 7 patients (8.2%) currently on immunosuppressive treatment, and 15 patients (17.4%) previously receiving such treatments. A total of 81 patients received both doses of the COVID-19 vaccine, of which 57 (70.4%) received Pfizer BNT162b2, 16 (19.7%) received Oxford AstraZeneca ChAdOx1-nCoV-19 (AZD1222) and the type of vaccine was unknown in 8 patients (9.9%). A total of 72 patients were COVID-19 antibody tested between October and November 2021 in which 68 (94.4%) had a positive antibody and 4 (5.6%) had a negative antibody test. The median time between first dose of the COVID-19 vaccination and antibody testing was 9 (8.6–9.5) months and the median time between second dose of the COVID-19 vaccination and antibody testing was 6.3 (5.8–6.7) months. Comparing the demographic and clinical characteristics between patients with positive and negative antibodies, a higher proportion of patients with history of receiving immunosuppression (currently or previously; $P = 0.004$) had a negative antibody status despite receiving two doses of COVID-19 vaccination. There were no further significant differences observed. Full study results are presented in Tables 1 and 2.

CONCLUSION: In our cohort of PD patients, detectable humoral response to COVID-19 vaccination was sustained 6 months following vaccination irrespective of the type of vaccination received. A higher proportion of patients with a history of receiving immunosuppression (current or past) had a poor antibody response following COVID-19 vaccinations, highlighting the importance of considering focused COVID-19 vaccination strategies in the context of immunosuppression.

Variables	Total (n=72)	Positive (n=68)	Negative (n=4)	p-value
Age	61 (47-70)	61 (47-69)	62 (51-69)	0.863
Gender (Male)	44 (61.1%)	41 (60.3%)	3 (75%)	1.000
Ethnicity (Caucasian)	53 (73.6%)	49 (72.1%)	4 (100%)	0.567
Diabetes mellitus	22 (30.5%)	22 (32.4%)	0	0.306
Hypertension	62 (86.1%)	59 (86.8%)	3 (75%)	0.458
Cardiovascular disease	28 (38.8%)	25 (36.8%)	3 (75%)	0.292
Cancer	3 (4.1%)	3 (4.4%)	0	1.000
Immunosuppression	19 (26.4%)	15 (22.1%)	4 (100%)	**0.004**
Vaccination type BNT162b2 Pfizer AZD1222 AstraZeneca Unknown*	 54 (75%) 16 (22.2%) 2 (2.8%)	 50 (75.8%) 16 (24.2%) 2 (2.94%)	 4 (100%) 0 0	0.567
Time between vaccination and antibody test (months) First dose vaccination Second dose vaccination	 9 (8.6-9.5) 6.3 (5.8-6.7)			

Categorical variables are expressed as number (%) and p-value (Fisher's exact test). Continuou variables are expressed as median (interquartile range) and p-value (Mann-Whitney U test).
* Unknown represents either Pfizer or AstraZeneca, but confirmation was not possible due t lack of access to community records and the dates were provided by the patients.

MO700 OUTCOMES OF REMOTE PATIENT MONITORING AMONG PERITONEAL DIALYSIS POPULATION IN THE COVID-19 ERA

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BACKGROUND AND AIMS: Automated peritoneal dialysis (APD) is a growing PD modality but as with other home dialysis methods, the lack of monitoring of patients' adherence to prescriptions is a limitation with potential negative impact on clinical outcome parameters. Remote patient monitoring (RPM-PD) allowing the clinical team to have access to dialysis data and adjust the treatment may overcome this limitation. As a result of the coronavirus disease 2019 (COVID-19) pandemic, the importance of RPM programs has raised to allow the physicians ensure optimal care of PD patients. In addition, to avoid the increased risk of complications or technique failure, the present study sought to determine clinical outcomes associated with RPM use in patients on APD therapy.
METHOD: We performed a systematic review in PubMed, MEDLINE, Embase and Cochrane databases to select studies that met the inclusion criteria. The search terms used were: peritoneal dialysis, remote monitoring, sharesource, outcomes, peritonitis, hospitalization, technique failure and adherence. These search terms were individually used and then combined in different databases. References within the chosen studies were reviewed. We followed the recommendations of Cochrane collaboration and the Quality of Reporting of Meta-analyses guidelines. STATA package-15 was used. We combined all study-specific estimates using inverse-variant weighted averages of logarithmic relative risk in random effects model. Confidence interval including the value of 1 was used evident for statistically significant estimate. Heterogeneity was evaluated using the Higgins I^2 statistic. Heterogeneity was estimated when the level of P-value was < 0.1. Results of the random effects model were spread out on the forest plot graph.
RESULTS: Twenty-two studies were included in our meta-analysis. In qualitative analysis: five studies showed that RPM in APD patients had lower hospitalization rates compared to traditional PD. Five studies showed better adherence in the RPM-PD group. Five studies showed better outcomes among RPM-APD patients in terms of symptom control, management of fluid balance, blood pressure control, dialysis prescription and electrolyte management. Five studies showed that RPM-APD had better outcomes in terms of patient independence, quality of life, patient and caregiver satisfaction. Five studies showed better cost-effectiveness in RPM-PD compared to traditional PD. Four studies showed better cost-effectiveness in RMP-PD. Three studies showed lower technique failure rates in RPM-PD compared to traditional PD. Three studies showed lower mortality rates in RPM-PD compared to traditional PD. Three studies showed better quality of life and patient satisfaction in RPM-PD. In quantitative analysis, RPM-PD patients had lower rates of technique failure (log relative risk = −0.32, 95% CI: −0.59 to −0.04), lower hospitalization rates (SMD = −0.84, 95% CI: −1.24 to −0.45), lower mortality rates (log RR = −0.26, 95% CI: −0.44 to −0.08) in comparison to traditional PD.
CONCLUSION: RPM-PD has better outcomes in terms of cost-effectiveness, patient adherence, hospital admissions, rate of peritonitis, technique failure, mortality rates, symptom control, quality of life, patient and caregiver satisfaction.

MO701 ORIGIN OF PROTEINS IN PERITONEAL DIALYSIS EXPLAINED BY A TRANSCRIPTOMICS/PROTEOMICS CROSS-OVER ANALYSIS

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BACKGROUND AND AIMS: Peritoneal dialysis effluent (PDE) is a rich but underexplored source of molecular markers for therapy monitoring and investigation of deregulated processes during PD. Modern high performance mass spectrometry (MS) and sequencing methods allow monitoring of hundreds of analytes in parallel. For understanding PD related processes on a systems biology level, a multilevel omics approach is particularly attractive. Here, we investigate the cellular transcriptome and cell-free proteome of PDE samples in combination with the publicly available Human Plasma Proteome Database to investigate the origin of proteins found in peritoneal dialysis effluent.
METHOD: Samples were obtained from clinically stable patients on chronic peritoneal dialysis during a highly standardized clinical routine check. The effluent material was separated into a cellular and cell-free component. Soluble proteins in the cell-free compartment were processed using our equalizing and TMT-labeling workflow