

**Supplementary Table 1. Characterization and clinical outcomes of kidney transplant recipients with COVID-19**

Patient Age and Gender	Years Since Transplant	ISx History	Comorbidity	Symptoms on Admission	ISx Used in Hospital	Other Medicines Used in Hospital	In-Hospital Complications	ICU/Vent	Length of Hospital Stay (days)	Clinical Outcome	Ref.
50 (M)	4	TAC MMF Steroids	HTN DM	Fever, Cough	TAC MMF Steroids	Ceftriaxone		/	9	Discharged	35
38 (M)	3	TAC MMF Steroids		Fever, Cough	TAC (R.D.) Steroids	Oseltamavir Arbedol		N/N	16	Discharged	36
38 (M)	5	TAC MMF Steroids	HTN DM	Fever, Cough	TAC MMF Steroids	Oseltamavir Arbedol		N/N	15	Discharged	36
64 (M)	19	TAC MMF Pred		Fever, Cough	TAC Pred			/	N/A	Discharged	37
28 (M)	4	TAC AZA Pred ADM		Fever, Cough	TAC ADM Pred		AKI	/	N/A	Discharged	37
51 (M)	10	TAC MMF Pred		Fever, Cough	TAC Pred		AKI	/	N/A	Discharged	37
32 (F)	1	TAC MMF Pred		Fever, Dyspnea	TAC Pred	HCQ		/	N/A	Discharged	37
21 (M)	4	TAC MMF		Fever, Cough	TAC MMF			/	N/A	Discharged	37
36 (M)	3	BET TAC MMF Pred		Fever, Cough	Betacept TAC Pred	HCQ		/	N/A	Discharged	37
72 (F)	4	TAC		Fever				/	N/A	Discharged	37

		MMF		Cough, Dyspnea							
76 (M)	11	TAC LEF		Fever, Cough	TAC	HCQ		/	N/A	Discharged	37
54 (M)	20	TAC MMF	HTN DM	Fever, Cough	TAC (R.D.) Pred	HCQ AZ Ceftriaxone Chloroquine		/N	13	Discharged	38
61 (M)	15	Cysp Steroid	CKD3A MZL PE Parkinson NB	Fever	Steroid	HCQ AZ Tocilizumab IVIG Meropenem	Pseudomonas	/N	22	Discharged	39
29 (M)	4	Cysp MMF Pred		Fever	Cysp MMF Pred	Lopinavir Ritonavir Moxifloxacin Bactrim Gamma Globulin		/	12	Discharged	40
32 (M)	5	TAC MMF Pred	HTN Pericarditis	Fever, Cough, Dyspnea	TAC MMF Pred	HCQ Oseltamavir Ceftaroline		/	11	Discharged	41
52 (M)	14	TAC MMF Pred		Fever, Cough		IVIG Biapenem Pantoprazole		/	14	Discharged	42
36 (F)	25	TAC Pred	SLS	Cough	Pred	Lopinavir Ritonavir Darunavir Cobicistat Ceftriaxone		/		Discharged	43
49 (M)	9	TAC MMF Pred	CGN	Fever, Cough, Dyspnea	Pred	Ribavirin Umifenovir Moxifloxacin		Y/N	18	Discharged	44
58 (M)	3	BET MMF	TC RVT	Fever, Cough	Pred Cysp			/	18	Discharged	45

		Pred	CAD	Dyspnea							
50 (M)	0	TAC MMF Pred EVE	HTN DM CAD	Cough	TAC MMF EVE			/	N/A	Discharged	46
37 (M)	7	TAC MMF Pred	HTN DM	Fever, Cough	TAC Pred	HCQ AZ		/	N/A	Discharged	46
63 (F)	9	TAC MMF	HTN	Fever, Cough	TAC	HCQ AZ Ceftriaxone	<i>Enterococcus</i> Urine	/N	N/A	Discharged	46
30 (F)	4	TAC MMF Pred	HTN DM	Cough	TAC Pred	HCQ AZ Ceftriaxone	<i>Klebsiella</i> urine Pneumoniae	/N	N/A	Discharged	46
80 (M)	14	TAC MMF	HTN DM CAD	Fever, Cough		Ceftriaxone Vancomycin		/Y	N/A	Discharged	46
45 (M)	3	TAC MMF Pred	HTN DM	Fever, Cough	TAC Pred	HCQ AZ Ceftriaxone		/N	N/A	Discharged	46
68 (M)	17	TAC MMF Pred	HTN DM	Cough, Dyspnea	TAC Pred	HCQ AZ Ceftriaxone Vancomycin Piperacillin/tac		/N	N/A	Discharged	46
24 (M)		TAC MMF Pred		Fever, Cough	TAC MMF Pred	Antivirals		/	16	Discharged	47
55 (M)		TAC MMF Pred	AF CHD CHF	Cough, Dyspnea	TAC (R.D.) Pred	Antivirals IVIG		/Y	43	Discharged	47
29 (M)		TAC MMF Pred		Fever, Cough, Dyspnea	TAC Pred			/	30	Discharged	47

30 (M)		TAC MMF Pred	HTN	Fever, Cough, Dyspnea	Pred	IVIG		/	16	Discharged	47
50 (M)		TAC MMF Pred	HTN	Fever, Cough, Dyspnea	TAC (R.D.) Pred	Antivirals IVIG		/	26	Discharged	47
52 (M)		TAC MMF Pred	HTN CAD	Fever, Cough, Dyspnea	TAC (R.D.) Pred	Antiviral IVIG		/	13	Discharged	47
49 (M)		TAC MMF		Fever, Cough, Dyspnea	TAC (R.D.) Pred	Antiviral		/	25	Discharged	47
37 (F)		TAC MMF Pred	HTN	Fever, Cough, Dyspnea	TAC (R.D.) Pred	Antiviral IVIG		/	21	Discharged	47
35 (M)	6	EVE Pred		Fever, Cough	Pred Cysp	Chloroquine Liponavir/Ritona vir Loop diuretics Cefuroxime Ceftriaxone		Y/Y	15	Discharged	48
28 (F)	0	TAC MMF Pred	TTMC	Fever	TAC MMF Pred	Oseltamavir AZ		N/N	1	Discharged	49
80 (M)	4	TAC MMF Pred	HTN DM NRP PAD	Cough, Dyspnea	TAC (R.D.) Pred	HCQ Liponavir Ritonavir		/	21	Discharged	26
76 (M)	15	Rap MMF Pred	IgA NRP HTN	Fever	Rap Pred	HCQ		/	10	Discharged	26
48 (M)	21	AZA Pred	HTN		AZA Pred			/	N/A	Discharged	50
54 (M)	6	TAC	Hemolytic		TAC			/	N/A	Discharged	50

		MMF	Anemia HTN								
70 (F)	18	CNI mTORi	HTN	Fever	Steroids	HCQ Lopinavir Ritonavir		/		Discharged	51
51 (M)	23	CNI MMF	HTN HCV	Fever	Steroids	HCQ Lopinavir Ritonavir Tocilizumab		/		Discharged	51
46 (M)	3	CNI MMF	HTN	Fever	Steroids	HCQ Lopinavir Ritonavir		/		Discharged	51
22 (M)	3	TAC Pred		Fever, Cough, Dyspnea	TAC (R.D.) Pred (R.D.)	HCQ AZ Tocilizumab	AKI	/Y	N/A	N/A	37
36 (M)	4	TAC MMF Pred		Fever, Cough	Pred			/N	29	N/A	52
56 (M)	9	TAC Pred	Candida Esophagitis CMV Gastritis AAMR	Cough	TAC (R.D.) Pred	HCQ AZ Famciclovir		/N	18	N/A	52
64 (M)	6	TAC MMF Rap	Breast cancer	Fever, Cough	TAC Steroids	Oseltamavir Arbedol		N/N	27	Still in hospital	36
37 (F)	3	TAC MMF Steroids	HTN	Fever, Cough	Steroids	Oseltamavir Arbedol IVIG		N/N	29	Still in hospital	36
47 (M)	3	TAC MMF Steroids		Fever, Cough		Oseltamavir Arbedol		N/N	18	Still in hospital	36

49 (M)	4	Cysp MMF Pred	HTN DM	Fever, Dyspnea	Cysp MMF Pred	Lopinavir Rionavir Ribavirin Interferon		/N	N/A	Still in hospital	52
51 (F)	1	TAC MMF Pred		Fever, Cough	TAC Pred	HCQ		Y/Y	N/A	Still in hospital	37
61 (M)	0	TAC MMF		Fever, Cough	Pred		AKI	Y/Y	N/A	Still in hospital	37
72 (F)	10	TAC MMF		Fever, Cough	TAC	HCQ AZ		/	N/A	Still in hospital	37
25 (F)	7	TAC MMF Pred		Cough	TAC Pred	HCQ AZ		/	N/A	Still in hospital	37
44 (M)	9	TAC MMF Pred		Dyspnea	TAC (R.D.) Pred	Dialysis	AKI	Y/Y	31	Still in hospital	53
52 (F)	1	TAC MMF Pred	HTN	Fever, Dyspnea	Pred	HCQ Antibiotics Darunavir Cobicistat		N/N	14	Still in hospital	54
50 (M)	4	TAC EVE Pred	HTN	Fever, Cough, Dyspnea	Pred	Ceftriaxone/AZ Liponavir Ritonavir Ceftaroline Meropenem Norepinephrine		Y/Y	12	Still in hospital	55
65 (F)		TAC MMF		Fever, Cough, Dyspnea	TAC (R.D.) Pred	Antiviral IVIG		/Y	45	Still in hospital	47
73 (M)	2	TAC MMF Pred	HTN DM NRP	Fever, Cough, Dyspnea	TAC (R.D.) Pred	HCQ Liponavir Ritonavir IVIG		/	19	Still in hospital	26

71 (M)	30	TAC	HTN DM CAD PKD	Fever	TAC (R.D.)	HCQ IVIG	<i>Klebsiella</i> Pneumonia	/	N/A	Still in hospital	26
39 (M)	17	TAC EVE Pred	HTN PKD	Fever	Pred	HCQ Tocilizumab	ARDS	/	15	Still in hospital	26
65 (M)	7	TAC MMF Pred	HTN DM CIN	Fever, Cough, Dyspnea	TAC (R.D.) MMF (R.D.) Pred	HCQ Liponavir Ritonavir	ARDS	/	12	Still in hospital	26
54 (F)	1	TAC MMF Pred	PTDM CMV		Pred			Y/Y	N/A	Still in hospital	50
65 (M)	1	TAC MMF Pred	HTN		TAC Pred			/	N/A	Still in hospital	50
69 (F)	0	TAC MMF Pred	HTN DM		TAC Pred			Y/N	N/A	Still in hospital	50
45 (M)	2	TAC AZA	HTN		TAC (R.D.)			/	N/A	Still in hospital	50
47 (F)	9	CNI MMF Pred		Fever	Pred	HCQ Lopinavir Ritonavir Tocilizumab		/		Still in hospital	51
60 (M)	9	CNI MMF Pred	HTN	Fever	Pred	HCQ Lopinavir Ritonavir		/		Still in hospital	51
73 (M)	7	CNI MMF Pred	HTN DM	Fever	Pred	HCQ Lopinavir Ritonavir		/		Still in hospital	51
59 (M)	10	MMF Pred	HTN DM IHD	Fever	Pred	HCQ Lopinavir Ritonavir		/		Still in hospital	51

49 (M)	2	CNI MMF Pred	HTN	Fever	Pred	HCQ Lopinavir Ritonavir Tocilizumab		/		Still in hospital	51
60 (F)	2	CNI MMF Pred	HTN	Fever	Pred	HCQ Lopinavir Ritonavir		/		Still in hospital	51
57 (M)	11	CNI MMF	HTN	Fever	Steroids	HCQ Lopinavir Ritonavir		/		Still in hospital	51
54 (M)	18	CNI Pred	HTN	Fever	Pred	HCQ Ritonavir Darunavir		/		Still in hospital	51
60 (M)	13	CNI	HTN DM IHD	Fever	Steroids	HCQ Lopinavir Ritonavir		/		Still in hospital	51
50 (M)	10	CNI MMF Pred	HTN	Fever	Pred	HCQ Ritonavir Darunavir		/		Still in hospital	51
69 (M)	22	CNI Pred	HTN DM	Fever	Pred	HCQ Ritonavir Darunavir		/		Still in hospital	51
44 (M)	14	CNI mTORi	HTN	Fever	Steroids	Darunavir		/		Still in hospital	51
70 (M)	5	BET MMF Pred		Fever, Cough	Pred		AKI	/	N/A	Death	37
78 (M)	10	TAC MMF Pred		Cough, Dyspnea	TAC Pred	HCQ AZ	AKI	/Y	N/A	Death	37
75 (M)	10	TAC MMF Pred	COPD HD HTN	Fever, Dyspnea	Pred	HCQ Lopinavir Ritonavir		N/N		Death	54



			Obesity			Antibiotics					
56 (M)	21	TAC MMF Pred	HTN DM	Fever, Cough	Pred	HCQ AZ Ceftriaxone		Y/Y	N/A	Death	46
74 (F)	9	SIR Pred	HTN Cancer	Fever, Cough, Dyspnea	Pred	HCQ AZ		Y/Y	N/A	Death	46
56 (F)	3	TAC MMF	HTN DM	Fever, Cough, Dyspnea	TAC	HCQ Levofloxacin	<i>E. Coli</i> Urine	Y/Y	N/A	Death	46
50 (M)		Cysp MIZ	HTN HHD COPD	Fever, Cough, Dyspnea	TAC (R.D.) Pred	Antiviral IVIG		/Y	6	Death	47
78 (M)	8	TAC Pred	PKD HTN PAC	Fever, Dyspnea	TAC (R.D.) Pred	Liponavir Ritonavir		/	4	Death	26
71 (F)	6	TAC MMF Pred	ESRD HTN	Fever, Cough, Dyspnea	TAC (R.D.) Pred	HCQ Liponavir Ritonavir IVIG		/	9	Death	26
67 (F)	1	TAC MMF Pred	HTN DM		TAC Pred			/	12	Death	50
71 (M)	13	CNI MMF Pred	IHD	Fever	Pred	HCQ Lopinavir Ritonavir		/		Death	51
57 (M)	2	CNI MMF Pred	HCV	Fever	Pred	HCQ Lopinavir Ritonavir Tocilizumab		/		Death	51
59 (M)	5	CNI MMF Pred	HTN	Fever	Pred	HCQ Lopinavir Ritonavir		/		Death	51
70 (F)	16	CNI	HTN	Fever	Pred	HCQ		/		Death	51

		Pred				Lopinavir Ritonavir					
63 (M)	16	MMF Pred	HTN	Fever	Pred	HCQ Lopinavir Ritonavir Tocilizumab		/		Death	51

**Abbreviations.** AAMR: acute antibody mediated rejection; AF: atrial fibrillation; AKI: acute kidney injury; ARDS: acute respiratory distress syndrome; AZ: azithromycin; CAD: chronic allograft dysfunction; BET: betacept; CGN: chronic glomerulus nephropathy; CHF: congestive heart failure; CHD: chronic heart disease; CKD3A: chronic kidney disease stage 3A; CMV: cytomegalovirus; ESRD: end stage renal disease; HD: heart disease; CKD: chronic kidney disease; CIN: chronic interstitial nephritis; CNI: calcinuerin inhibitor; COPD: chronic obstructive pulmonary disease; CVA: cerebrovascular accident; CVD: cardiovascular disease; Cysp: cyclosporine; EVE: everolimus; HCQ: hydroxychloroquine; HCV: hepatitis C; HPL: hyperlipidemia; HPN: hypertension; IBD: inflammatory bowel disease; ICU: Intensive care unit; IHD: ischemic heart disease; ISx: immunosuppressant; LEF: Leflunomide; MIZ: mizoribine; MMF: mycophenolate mofetil; MZL: marginal zone lymphoma; mTORi: mTOR inhibitor; NB: neurogenic bladder; NRP: nephropathy; OP: outpatient; OSA: obstructive sleep apnea; PAC: prostate adenocarcinoma; PAD: peripheral artery disease; PE: pulmonary embolism; PKD: polycystic kidney disease; Pred: prednisone; PNA: pulmonary nodular amyloidosis; PSC: primary sclerotic cholangitis; PTDM: post-transplantation diabetes mellitus R.D.: reduced dose; RVT: renal vein thrombosis; SIR: Sirolimus; SLS: Senior-Loken syndrome; TAC: tacrolimus; TC: testicular cancer; TTMA: transient thrombotic microangiopathy; UC: ulcerative colitis; Vent: ventilation.