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            |                           |          |                               |                |      |
|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 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 Ceftraroline | / | 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 |
| Age | Gender | Pancytopenia | CAD | Dyspnea | Fever, Cough | Drug Treatment | Outcome | Days Discharged |
|-----|--------|--------------|-----|---------|-------------|---------------|---------|-----------------|
| 50 (M) | 0 | TAC MMF Pred | 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 | Enterococcus Urine | /N | N/A | Discharged 46 |
| 30 (F) | 4 | TAC MMF Pred | HTN DM | Cough | TAC Pred | HCQ AZ Ceftriaxone | Klebsiella 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 |
| Age (Y) | Gender | Treatment 1 | Disease 1 | Treatment 2 | Disease 2 | Outcome 1 | Duration | Outcome 2 |
|--------|--------|-------------|-----------|-------------|-----------|-----------|----------|-----------|
| 30 (M) | TAC    | MMF         | HTN       | Pred        | Fever,   | TAC (R.D.) | IVIG     | /         | 16        |
|        |        | Pred IVIG   | Fever,    | TAC (R.D.)  | Cough,   | Pred       |          |           | Discharged |
|        |        |             | Dyspnea   | Pred        | Dyspnea  | Antivirals |          |           | 47        |
| 50 (M) | TAC    | MMF         | HTN       | Pred IVIG   | Fever,   | TAC (R.D.) | /        | 26        | Discharged |
|        |        |             | Fever,    | Pred        | Cough,   | TAC (R.D.) |          |           | 47        |
|        |        |             | Dyspnea   | Pred        | Dyspnea  | Antivirals |          |           |           |
| 52 (M) | TAC    | MMF         | HTN       | Pred        | Fever,   | TAC (R.D.) | IVIG     | /         | 13        |
|        |        |             | Fever,    | Pred        | Cough,   | TAC (R.D.) |          |           | Discharged |
|        |        |             | Dyspnea   | Pred        | Dyspnea  | Antivirals |          |           | 47        |
| 49 (M) | TAC    | MMF         | CAD       | Pred        | Fever,   | TAC (R.D.) | /        | 25        | Discharged |
|        |        |             | Fever,    | Pred        | Cough,   | TAC (R.D.) |          |           | 47        |
|        |        |             | Dyspnea   | Pred        | Dyspnea  | Antivirals |          |           |           |
| 37 (F) | TAC    | MMF         | HTN       | Pred        | Fever,   | TAC (R.D.) | /        | 21        | Discharged |
|        |        |             | Fever,    | Pred        | Cough,   | TAC (R.D.) |          |           | 47        |
|        |        |             | Dyspnea   | Pred        | Dyspnea  | Antivirals |          |           |           |
| 35 (M) | 6      | EVE         | Pred      | Fever,     | Pred     | Chloroquine|          | Y/Y       | 15        |
|        |        |             | Fever,    | Cough      | Cysp     | Liponavir/|          |           | Discharged |
|        |        |             | Cysp      | Pred       | ritonavir| Loop diuretics|          |           | 48        |
|        |        |             |           |            |          | Cefuroxime|          |           |           |
|        |        |             |           |            |          | Ceftriaxone|          |           |           |
| 28 (F) | 0      | TAC         | MMF       | Fever      | TAC      | Oseltamavir|          | N/N       | 1         |
|        |        | Pred IVIG   | MMF       | Fever      | MMF      | AZ         |          |           | Discharged |
|        |        |             |             |             | Pred     | Oseltamavir|          |           | 49        |
|        |        |             |             |             | Cystip    | AZ         |          |           |           |
| 80 (M) | 4      | TAC         | MMF       | Cough,     | TAC      | HCQ        |          | /         | 21        |
|        |        | Pred       | MMF       | Cough,     | (R.D.)   | Liponavir  |          |           | Discharged |
|        |        |             | Pred      | Dyspnea    | Pred     | ritonavir  |          |           | 26        |
|        |        |             |           |            | Cysp     | Ritonavir  |          |           |           |
| 76 (M) | 15     | Rap         | MMF       | Fever      | Rap      | HCQ        |          | /         | 10        |
|        |        | Pred       | MMF       | Fever      | Pred     | HCQ        |          |           | Discharged |
|        |        |             |             |             | Cysp     | HCQ        |          |           | 26        |
| 48 (M) | 21     | AZA         | HTN       | AZA        |         | /          |          | N/A       | Discharged |
|        |        | Pred       | HTN       | Pred       |         |            |          |           | 50        |
| 54 (M) | 6      | TAC         | Hemolytic | TAC        |         | /          |          | N/A       | Discharged |
|        |        |             | TAC       |            |         |            |          |           | 50        |
| Age  | Sex | Disease | Comorbidities | Medications | Complications | Days in Hospital |
|------|-----|---------|---------------|-------------|---------------|-----------------|
| 70   | F   | Anemia  | HTN           | Steroids    | HCQ, Lopinavir|                |
|      |     |         |               |             | Ritonavir     |                |
| 51   | M   | HTN     | Fever         | Steroids    | HCQ, Lopinavir|                |
|      |     |         |               |             | Ritonavir,    |                |
|      |     |         |               |             | Tocilizumab   |                |
|      |     |         |               |             |               |                |
| 46   | M   | HTN     | Fever         | Steroids    | HCQ, Lopinavir|                |
|      |     |         |               |             | Ritonavir     |                |
|      |     |         |               |             |               |                |
| 22   | M   | Fever,  | TAC, Pred     | Fever,      | Pred          |                |
|      |     | Cough,  |               | Cough       |               |                |
|      |     | Dyspnea |               |             |               |                |
| 36   | M   | Fever,  | TAC, Pred     | Fever,      | Pred          |                |
|      |     | Cough   |               | Cough       |               |                |
| 56   | M   | Candida Esophagitis, | Cough | TAC, Pred | Pred          |                |
|      |     | CMV Gastritis AAMR | | |               |                |
| 64   | M   | Breast cancer | Fever,     | TAC, Steroids |               |
|      |     |         | Cough | | Oseltamavir Arbedol | |
| 37   | F   | HTN     | Fever,   | Steroids    | Oseltamavir Arbedol | |
|      |     |         | Cough   |             | Arbedol IVIG  | |
| 47   | M   | Fever,  | TAC,      | Oseltamavir Arbedol | |
|      |     | Cough   | MMF Steroids | | Arbedol | N/N | 18 | Still in hospital |
| 37   | F   | HTN     | Fever,   | Steroids    | Oseltamavir Arbedol | |
|      |     |         | Cough   |             | Arbedol IVIG  | |
| 47   | M   | Fever,  | TAC,      | Oseltamavir Arbedol | |
|      |     | Cough   | MMF Steroids | | Arbedol | N/N | 18 | Still in hospital |
|   |   | Condition | Medication | Progress |
|---|---|-----------|------------|----------|
| 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 HCQ | 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 | 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 |
| No  | Age (Y) | Gender | Baseline Disease | Symptoms | Treatment | Comorbidities | Duration in Hospital | Status |
|-----|---------|--------|------------------|----------|-----------|---------------|----------------------|--------|
| 71  | 30      | M      | TAC, DM, CAD, PKD| Fever    | TAC (R.D.)| HTN, PKD      | 26                   | Still in hospital   |
| 39  | 17      | M      | TAC, EVE, Pred  | Fever    | Pred      | HTN, PKD      | 15                   | Still in hospital   |
| 65  | 7       | M      | TAC, MMF, Pred  | Fever, Cough, Dyspnea | TAC (R.D.), MMF (R.D.), Pred | HTN, DM, CIN | 12                   | Still in hospital   |
| 54  | 1       | F      | TAC, MMF, Pred  | PTDM, CMV| Pred      | HTN, PKD      | 50                   | Still in hospital   |
| 65  | 1       | M      | TAC, MMF, Pred  | HTN      | TAC       | Pred          | 50                   | Still in hospital   |
| 69  | 0       | F      | TAC, MMF, Pred  | HTN      | TAC       | Pred          | 50                   | Still in hospital   |
| 45  | 2       | M      | TAC, AZA       | HTN      | TAC (R.D.)| Pred          | 50                   | Still in hospital   |
| 47  | 9       | F      | CNI, MMF, Pred  | Fever    | Pred      | HTN, PKD      | 51                   | Still in hospital   |
| 60  | 9       | M      | CNI, MMF, Pred  | Fever    | Pred      | HTN, PKD      | 51                   | Still in hospital   |
| 73  | 7       | M      | CNI, MMF, Pred  | Fever    | Pred      | HTN, DM       | 51                   | Still in hospital   |
| 59  | 10      | M      | MMF, Pred      | HTN, DM  | Fever     | MMF, Pred     | 51                   | Still in hospital   |
| Age (M) | Age (F) | CNI | MMF | Pred | HTN | Fever | Pred | HCQ | Lopinavir | Ritonavir | Tocilizumab | / | Still in hospital | 51 |
|--------|--------|-----|-----|------|-----|-------|------|-----|-----------|-----------|-------------|---|-----------------|----|
| 49 (M) |        | CNI | MMF | Pred |     |       |      |     | /         | /         |             | / |                 |    |
| 60 (F) | 2      | CNI | MMF | Pred |     |       |      |     | /         | /         |             | / |                 |    |
| 57 (M) | 11     | CNI | MMF |      |     |       | Steroids |     | /         | /         |             | / |                 |    |
| 54 (M) | 18     |     |     |      |     |       |      |     | /         | /         |             | / |                 |    |
| 60 (M) | 13     |     |     |      |     | Fever | Steroids |     | /         | /         |             | / |                 |    |
| 50 (M) | 10     |     |     |      |     | HTN   | Fever | Pred | /         | /         |             | / |                 |    |
| 69 (M) | 22     |     |     |      |     | HTN   | Fever | Pred | /         | /         |             | / |                 |    |
| 44 (M) | 14     |     |     |      |     | HTN   | Fever | Steroids | /         | /         | / |                 |    |
| 70 (M) | 5      |     |     |      |     | Fever, Cough | Pred |     | AKI | / | N/A |                 |    |
| 78 (M) | 10     |     |     |      |     | Cough, Dyspnea | TAC | Pred | HCQ | AKI | /Y | N/A |                 |    |
| 75 (M) | 10     |     |     |      |     | COPD, HD, HTN | Fever, Dyspnea | Pred | HCQ | Lopinavir | Ritonavir | N/N |                 |    |
| Age (Yrs) | Gender | Comorbidities | Symptoms | Drugs | Antibiotics | Outcome | Age at Death |
|----------|--------|---------------|----------|-------|-------------|---------|--------------|
| 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 Pred  | HTN DM   | Fever, Cough, Dyspnea | TAC  | HCQ Levofloxacin E. Coli 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   | Fever, Cough, Dyspnea | 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 |
| Age (M) | 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.