

Transplant and COVID-19 literature search	
Source	Population
Cravedi P, Suraj SM, Azzi Y, et al. COVID-19 and Kidney Transplantation: Results from the TANGO International Transplant Consortium [published online ahead of print, 2020 Jul 10]. <i>Am J Transplant</i> . 2020;10.1111/ajt.16185. doi:10.1111/ajt.16185	12 transplant centers in the US, Italy and Spain. There were 9,845 kidney transplant recipients across centers, 144 were hospitalized due to COVID-19 during the 9-week study period. 65% were male with a mean age of 60 (± 12) years, 40% Hispanic and 25% African-American. Prevalent comorbidities included hypertension (95%), diabetes (52%), obesity (49%), heart (28%) and lung (19%) disease.
Registry data. ERACODA 5th study report. The ERA–EDTA COVID-19 database established in March.	As of June 1, data on 1073 patients with COVID-19 and kidney failure from 26 countries had been entered in ERACODA.
Pereira MR, Mohan S, Cohen DJ, et al. COVID-19 in solid organ transplant recipients: Initial report from the US epicenter. <i>Am J Transplant</i> . 2020;20(7):1800-1808. doi:10.1111/ajt.15941	Study from New York City. Ninety patients were analyzed with a median age of 57 years. Forty-six were kidney recipients, 17 lung, 13 liver, 9 heart, and 5 dual-organ transplants.
Fernández-Ruiz M, Andrés A, Loinaz C, et al. COVID-19 in solid organ transplant recipients: A single-center case series from Spain. <i>Am J Transplant</i> . 2020;20(7):1849-1858. doi:10.1111/ajt.15929	18 SOT (kidney [44.4%], liver [33.3%], and heart [22.2%]) recipients diagnosed with COVID-19 by March 23, 2020 at a tertiary-care center at Madrid.

<p>Chaudhry, ZS, Williams, JD, Vahia, A, et al. Clinical characteristics and outcomes of COVID-19 in solid organ transplant recipients: A case-control study. <i>Am J Transplant</i>. 2020; 00: 1– 10. https://doi.org/10.1111/ajt.16188</p>	<p>The clinical characteristics of 47 SOTr (38 kidneys and 9 nonkidney organs) were compared to 100 consecutive hospitalized nontransplant controls. Twelve of 47 SOTr managed as outpatients were subsequently excluded from the outcome analyses to avoid potential selection bias.</p>
<p>Devresse, A et al. COVID-19 Infection in Kidney Transplant Recipients: A Single-Center Case Series of 22 Cases From Belgium. <i>Kidney Medicine</i></p>	<p>Cohort of 1200 kidney transplant recipients. Eighteen patients (82%) required hospitalization</p>
<p>Montagud-Marrahi E, Cofan F, Torregrosa JV, et al. Preliminary data on outcomes of SARS-CoV-2 infection in a Spanish single center cohort of kidney recipients [published online ahead of print, 2020 May 5]. <i>Am J Transplant</i> . 2020;10.1111/ajt.15970. doi:10.1111/ajt.15970</p>	<p>33 kidney transplant recipients diagnosed with COVID-19 out of a cohort of around 1400</p>
<p>Akalin E, Azzi Y, Bartash R, et al. Covid-19 and Kidney Transplantation. <i>N Engl J Med</i> . 2020;382(25):2475-2477. doi:10.1056/NEJMc2011117</p>	<p>36 adult kidney-transplant recipients</p>
<p>Tschopp, J, L'Huillier, AG, Mombelli, M, et al. First experience of SARS-CoV-2 infections in solid organ transplant recipients in the Swiss Transplant Cohort Study. <i>Am J Transplant</i>. 2020; 00: 1– 7. https://doi.org/10.1111/ajt.16062</p>	<p>21 SOT recipients (10 kidney, 5 liver, 2 kidney-pancreas, 1 kidney-lung, 1 pancreas, 1 lung and 1 heart)</p>

Hoek RAS, Manintveld OC, Betjes MGH, et al. COVID-19 in solid organ transplant recipients: a single-center experience [published online ahead of print, 2020 May 27]. <i>Transpl Int</i> . 2020;10.1111/tri.13662. doi:10.1111/tri.13662	23 SOT transplant recipients (n = 3 heart; n = 15 kidney; n = 1 kidney-after-heart; n = 3 lung, and n = 1 liver transplant recipient)
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------

Mortality in people with positive test	Additional information on denominator group
Mortality 32%	The 44 patients who died were older, had lower lymphocyte counts and eGFR, higher serum lactate dehydrogenase, procalcitonin and IL-6 levels.
At 28-day follow-up, 21% of kidney transplant patients had died, as had 25% of dialysis patients.	Of patients included on the database, 305 (28%) were kidney transplant recipients. By 28 days, 21% of these patients had died--a case fatality rate only slightly lower than the 25% case fatality rate seen in dialysis patients. In patients managed outside the hospital, mortality was low at 3% of kidney transplant patients compared to 5% of dialysis patients. Following admission to hospital, 24% of transplant patients died compared to 33% of dialysis patients. Of those treated in the intensive care unit (ICU), 45% of kidney transplant patients died compared with 53% of dialysis patients.
68 patients hospitalized. Sixteen patients died (18% overall, 24% of hospitalized, 52% of ICU) and 37 (54%) were discharged.	
As of April 4, the case-fatality rate was 27.8% (5/18).	Median age at diagnosis was 71.0 ± 12.8 years, and the median interval since transplantation was 9.3 years.

<p>Overall mortality was 17% (8/47), in the transplant cohort, 23% (8/35) among those hospitalized and 58% (7/12) requiring mechanical ventilation. Overall, mortality between these 2 groups was comparable (23% vs 25% odds ratio [OR] 0.88 confidence interval [CI] [0.36-2.21] P = .8).</p>	
<p>9% mortality</p>	<p>After a median of 10 days, 13 kidney transplant recipients were discharged, 2 were hospitalized in non-ICU, 1 was in ICU, and 2 patients had died</p>
<p>6% mortality (this was an early report)</p>	
<p>At a median follow-up of 21 days, 10 of the 36 kidney-transplant recipients (28%) had died.</p>	<p>Two of the 8 patients who were monitored as outpatients died at home; both were recent kidney-transplant recipients who had received antithymocyte globulin within the previous 5 weeks</p>
<p>After a median of 33 days of follow-up, 16 patients had been discharged , 3 patients were still hospitalized (among whom 2 were in the ICU but were extubated) and 2 patients had died.Overall mortality : 9.5%</p>	<p>More than 5000 SOT recipients</p>

5 patients died: 21%	
----------------------	--

Other information

AKI occurred in 52% cases, respiratory failure requiring intubation in 29%

As in the general population, age over 75 years was the most important risk factor for death in kidney transplant patients, but male sex, diabetes and cardiovascular disease were not associated with mortality risk. There was also no evidence of benefit from treatment with antiviral drugs, or reduction or withdrawal of immunosuppressive therapy.

The overall median age of the cohort was 57 years, 59% were men, 63% Caucasian race, and 42% Hispanic ethnicity

After a median follow-up of 18 days from symptom onset, 30.8% (4/13) of survivors developed progressive respiratory failure, 7.7% (1/13) showed stable clinical condition or improvement, and 61.5% (8/13) had been discharged home.

CKD (89% vs 57% $P = .0007$), diabetes (66% vs 33% $P = .0007$), and hypertension (94% vs 72% $P = .006$) were more common in the 35 hospitalized SOTr compared to controls. Primary composite outcome (escalation to intensive care unit, mechanical ventilation, or in-hospital all-cause mortality) was comparable between SOTr and

7.6% were male, age of 57.3 ± 17 years, median transplant vintage of 10.7 [4-14.7]. No recently transplanted patients (<3 months) were diagnosed with COVID-19.

26 recipients (72%) were male, and the median age was 60 years (range, 32 to 77). Fourteen recipients (39%) were black, and 15 recipients (42%) were Hispanic. Twenty-seven recipients (75%) had ~~received a deceased-donor kidney~~. 34 recipients
There were 6 females (33%) and median age was 56 years (IQR 49-65)

