



# PRESS RELEASE

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## COVID-19 IN PATIENTS WHO HAVE RECEIVED KIDNEY TRANSPLANTS OR ARE UNDERGOING DIALYSIS

*Two new studies examine the health and outcomes of these patient populations.*

### Highlights

- A recent study found that most kidney transplant recipients with COVID-19 do not need to be hospitalized.
- Another study found that patients on dialysis who develop COVID-19 may have symptoms that are different from other patients with the infectious disease.

**Washington, DC** — Two new studies examine the health and outcomes of patients with COVID-19 who have undergone kidney transplantation or are receiving hemodialysis. The findings appear in an upcoming issue of *CJASN*.

During the global COVID-19 pandemic, it's important to identify individuals who are at high risk of developing severe forms of the disease. Kidney transplant recipients—who take life-long immunosuppressive drugs and tend to have additional illnesses—may be especially vulnerable. Early reports indicate that kidney transplant recipients who are hospitalized for COVID-19 have similar symptoms and outcomes as other patients, but little is known about how they fare in the outpatient setting, when they are not admitted to a hospital.

To provide insights, clinicians led by Sumit Mohan, MD, MPH and S. Ali Husain, MD, MPH (Columbia University Medical Center) described their early experience with outpatient kidney transplant recipients with established or suspected COVID-19 seen at their medical center.

Of 41 patients who were included, 22 (54%) had confirmed COVID-19 and 19 (46%) were suspected cases. Patients most commonly reported fever, cough, and shortness of breath. Most patients' symptoms went away without the need for hospitalization. Thirteen (32%) patients required hospitalization, and these patients were more likely to have shortness of breath and higher levels of a blood marker for impaired kidney function. There were no differences in demographics or medical illnesses between those who were or were not admitted to the hospital.

“In the midst of the pandemic surge in New York, many transplant recipients needed to be monitored remotely. Our report underscores the fact that a comprehensive outpatient

monitoring protocol could provide adequate clinical care and excellent outcomes for outpatient kidney transplant recipients with COVID-19 by allowing identification of those individuals who would benefit from inpatient care,” said Dr. Husain.

Of note, the study revealed a wide variation in the amount of time it took patients to improve. Among the patients who were hospitalized, the average time between symptom onset and admission was 8 days (similar to the general US population), but one patient was admitted 16 days after symptoms started. Among the patients with outpatient management, the average time from symptom onset to improvement was 12 days, with one patient taking 23 days before symptoms improved. “These findings show that patients must be followed until improvement to watch for late worsening of symptoms requiring hospitalization,” Dr. Husain said.

Another study led by Xiangyou Li, PhD (Tongren Hospital of Wuhan University) investigated the clinical features of patients with kidney failure on hemodialysis who developed COVID-19. The study included 49 hospitalized dialysis patients and 52 hospitalized patients without kidney failure (controls) with confirmed COVID-19 in Wuhan, China from January 30<sup>th</sup> to March 10<sup>th</sup>.

Fever, fatigue, and dry cough were the dominant symptoms in controls, whereas the most common symptoms in patients on dialysis were fatigue and anorexia, with fever and cough being less common.

Common complications including shock, acute respiratory distress syndrome, arrhythmia, and acute cardiac injury were significantly higher in patients on dialysis. Also, 14% of patients on hemodialysis died, compared with 4% of controls.

An accompanying editorial stresses the need for more research and guidance related to COVID-19 in these patient populations. “As time passes, a treatment protocol based on patient characteristics, phase of illness, and disease severity using antivirals, anti-coagulation, immunomodulators, and immunosuppressive agents will be formulated,” the authors wrote. “However, there are concrete steps that the nephrology community can take immediately to optimize the safety of our patients and ourselves.”

A Patient Voice editorial also accompanies the articles.

Dr. Husain’s co-authors include Geoffrey Dube, MD, Heather Morris, MD, Hilda Fernandez, MD, Jae-Hyung Chang, MD, Kathryn Paget, NP, Sharlinee Sriitharan, NP, Shefali Patel, NP, Olga Pawliczak, NP, Mia Boehler, NP, Demetra Tsapepas, PharmD, R. John Crew, MD, and David J. Cohen, MD.

Dr. Li’s co-authors Jun Wu, Jushuang Li, Geli Zhu, Yanxia Zhang, Zhimin Bi, Yean Yu, Bo Huang, Shouzhi Fu, Yiqing Tan, and Jianbin Sun.

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The article, titled “Early Outcomes of Outpatient Management of Kidney Transplant Recipients with COVID-19,” is available online at <https://cjasn.asnjournals.org/content/early/2020/05/15/CJN.05170420>.

The article, titled “Clinical Features of Maintenance Hemodialysis Patients With 2019 Novel Coronavirus-infected Pneumonia in Wuhan, China,” is available online at <https://cjasn.asnjournals.org/content/early/2020/05/21/CJN.04160320>.

The editorial, titled “COVID-19 in Patients with Kidney Disease: A High Risk Population,” is available online at <https://cjasn.asnjournals.org/content/early/2020/07/06/CJN.09730620>.

The Patient Voice editorial, titled “Long-term Hemodialysis during the COVID Pandemic,” is available online at <https://cjasn.asnjournals.org/content/early/2020/07/01/CJN.09100620>.

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