Review of: "Characteristics and outcomes of acute kidney injury in hospitalized COVID-19 patients: A multicenter study by the Turkish society of nephrology"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

This is a multi center observational study of patients of acute kidney injury admitted to hospitals. One limitation is the retrospective nature. This may be one reason for reporting of huge burden of stage 3 AKI admitted to ICU with half of those in ICU requiring ventilator and ECMO support. Literature from other areas shows a variation of AKI incidence from 0.5 % to 80 % which may be reflective of differences in patient characteristics, comorbidities,

Whether cases were included based on laboratory data or clinically confirmed and variation in fluid, hemodynamic and ventilation management. High number of patients with comorbidities may be due to a referral bias of sicker and difficult to manage patients coming to tertiary care hospitals. This could be clarified by comparison with the general population.

As 291/578 were admitted to ICU It would have been appropriate if authors report AKI stages separately for those admitted to ICU as their characteristics are expected to be different. The authors must be commended for extracting data on estimated GFR for a substantial number of patients over previous one year thus being able to accurately assess presence of CKD. Since 43.3% of patients had Prerenal AKI authors could report on outcomes in these as it would have preventive and management implications. The study findings correspond with other studies on COVID 19 and other causes of AKI admitted to hospitals which show that mortality and renal outcomes are worse with increasing stages of AKI. Overall this study adds to the burgeoning literature on COVID 19 with findings which are consistent with studies from other regions but is important in that it highlights close monitoring of patients who are elderly, having comorbidities such as Diabetes mellitus, hypertension, CKD and efforts to treat early to avoid progression to later stages of AKI.

References

- Ng JH, Bijol V, Sparks MA, Sise ME, Izzedine H, Jhaveri KD. Pathophysiology and Pathology of Acute Kidney Injury in Patients With COVID-19. Adv Chronic Kidney Dis. 2020 Sep;27(5):365-376. doi: 10.1053/j.ackd.2020.09.003. Epub 2020 Oct 20. PMID: 33308501; PMCID: PMC7574722.
- 2. Hirsch J.S, Ng J.H, Ross D.W,et al. Acute kidney injury in patients hospitalized with COVID-19. *Kidney Int.* 2020; 98: 209-218.
- 3. Robbins-Juarez SY, Qian L, King KL, et al. Outcomes for patients with COVID-19 and acute kidney injury:

a systematic review and meta-analysis. Kidney Int Rep. 2020;5(8):1149-1160.