

# Special Nephrology Considerations in the COVID-19 Patient

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## Kidney Transplant

- Immunosuppressed population is at increased risk of developing severe disease
- Recommend nephrology transplant team consultation to determine possible discontinuation of immunosuppressive medications

## End Stage Renal Disease

- Daily fluid restriction < 1L
- ESRD diet
- Close monitoring dosing/avoidance of nephrotoxic agents
- Consider reducing frequency of dialysis if possible
- Consider isolated dialysis treatments in patient room instead of communal room

## Acute Kidney Injury

- Overall, high incidence in COVID patients
- NSAIDs may increase AKI risk; recommend avoidance
- ACE2 coreceptor for COVID-19 entry into cells
  - Currently recommend continuation of ACEi/ARBs
  - No experimental data demonstrating beneficial or adverse outcomes with continuation of ACEi/ARBs
  - Discontinuation recommended in hypotension and hyperkalemia

## Simplified algorithm for AKI evaluation

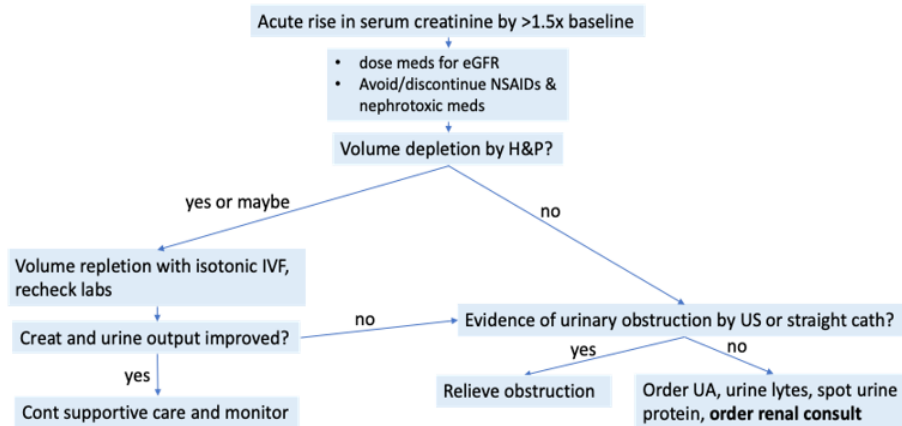
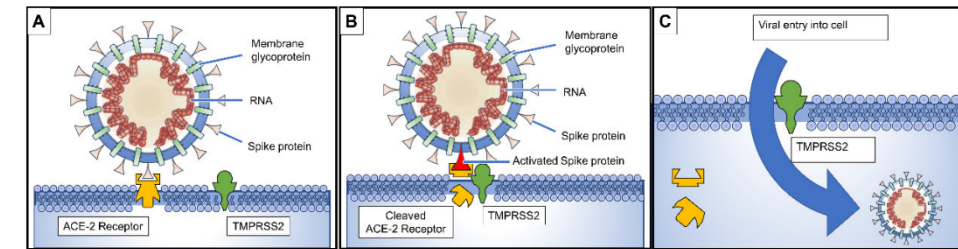


Figure 1. Simplified Algorithm for AKI Evaluation (1).

Figure 2. COVID entry into host cell via surface protein binding to Angiotensin Converting Enzyme 2 (ACE2) surface receptor binding (6).



## Resources

- Naicker, et al. Kidney Int. (2015)87, 5-7..doi:10.1038/ki.2014.375
- HAS/ACC/AHA Statement Addresses Concerns Re: Using RAAS Antagonists in COVID-19 3/17/2020
- Statement from the International Society of Hypertension on COVID-19 (3/16/2020)
- COVID-19 and Angiotensin-Converting Enzyme Inhibitors and Angiotensin Receptor Blockers: What Is the Evidence? (JAMA 3/24.2020)
- Ison, M. Coronaviruses: HCOV, SARS-COV, MERS-COV, and COVID-19. Decker Medicine. <https://www.deckerip.com/decker/surgery/chapter/4699/> (3/30/2020)
- Rabi, F. et al. SARS-COV-2 and Coronavirus Disease 2019: What We Know So Far. Pathogens. 2020, 9 (3), 231