

Supplementary materials

Additional references

- S1. Su H, Yang M, Wan C, Yi LX, Tang F, Zhu HY, Yi F, Yang HC, Fogo AB, Nie X, Zhang C. Renal histopathological analysis of 26 postmortem findings of patients with COVID-19 in China. *Kidney Int.* 2020. doi:10.1016/j.kint.2020.04.003.
- S2. Diao B, Feng Z, Wang C, Wang H, Liu L, Wang C, Wang R, Liu Y, Liu Y, Wang G, Yuan Z, Wu Y, Chen Y. Human Kidney is a Target for Novel Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection. *medRxiv.* 2020;2:2020.03.04.20031120. doi:10.1101/2020.03.04.20031120.
- S3. Puelles VG, Lütgehetmann M, Lindenmeyer MT, Sperhake JP, Wong MN, Allweiss L, Chilla S, Heinemann A, Wanner N, Liu S, Braun F, Lu S, Pfefferle S, Schröder AS, Edler C, Gross O, Glatzel M, Wichmann D, Wiech T, Kluge S, Pueschel K, Aepfelbacher M, Huber TB. Multiorgan and Renal Tropism of SARS-CoV-2. *N Engl J Med.* May 2020. doi:10.1056/NEJMc2011400.
- S4. Miller SE, Brealey JK. Visualization of putative coronavirus in kidney. *Kidney Int.* 2020;0(0). doi:10.1016/j.kint.2020.05.004.
- S5. Calomeni E, Satoskar A, Ayoub I, Brodsky S, Rovin BH, Nadasdy T. Multivesicular bodies mimicking SARS-CoV-2 in patients without COVID-19. *Kidney Int.* 2020;0(0). doi:10.1016/j.kint.2020.05.003.
- S6. Zarbock A, Gomez H, Kellum JA. Sepsis-induced acute kidney injury revisited: Pathophysiology, prevention and future therapies. *Curr Opin Crit Care.* 2014;20(6):588-595. doi:10.1097/MCC.0000000000000153.
- S7. Panitchote A, Mehkri O, Hasting A, Hanane T, Demirjian S, Torbic H, Mireles-Cabodevila E, Krishnan S, Duggal A. Factors associated with acute kidney injury in acute respiratory distress syndrome. *Ann Intensive Care.* 2019;9(1). doi:10.1186/s13613-019-0552-5.
- S8. Fisher BJ, Seropian IM, Kraskauskas D, Thakkar JN, Voelkel NF, Fowler AA, Natarajan R. Ascorbic acid attenuates lipopolysaccharide-induced acute lung injury. *Crit Care Med.* 2011;39(6):1454-1460. doi:10.1097/CCM.0b013e3182120cb8.
- S9. Fowler AA, Syed AA, Knowlson S, Sculthorpe R, Farthing D, DeWilde C, Farthing CA, Larus TL, Martin E, Brophy DF, Gupta S, Fisher BJ, Natarajan R. Phase I safety trial of intravenous ascorbic acid in patients with severe sepsis. *J Transl Med.* 2014;12(1). doi:10.1186/1479-5876-12-32.

- S10. Fowler AA, Truwit JD, Hite RD, Morris PE, Dewilde C, Priday A, Fisher B, Thacker LR, Natarajan R, Brophy DF, Sculthorpe R, Nanchal R, Syed A, Sturgill J, Martin GS, Sevransky J, Kashiouris M, Hamman S, Egan KF, Hastings A, Spencer W, Tench S, Mehkri O, Bindas J, Duggal A, Graf J, Zellner S, Yanny L, McPolin C, Hollrith T, Kramer D, Ojielo C, Damm T, Cassity E, Wieliczko A, Halquist M. Effect of Vitamin C Infusion on Organ Failure and Biomarkers of Inflammation and Vascular Injury in Patients with Sepsis and Severe Acute Respiratory Failure: The CITRIS-ALI Randomized Clinical Trial. In: *JAMA - Journal of the American Medical Association*. Vol 322. American Medical Association; 2019:1261-1270. doi:10.1001/jama.2019.11825.
- S11. Hernández A, Papadakos PJ, Torres A, González DA, Vives M, Ferrando C, Baeza J. Two known therapies could be useful as adjuvant therapy in critical patients infected by COVID-19. *Rev Esp Anestesiol Reanim*. 2020;67(5). doi:10.1016/j.redar.2020.03.004.
- S12. Cheng RZ. Can early and high intravenous dose of vitamin C prevent and treat coronavirus disease 2019 (COVID-19)? *Med Drug Discov*. 2020;5:100028. doi:10.1016/j.medidd.2020.100028.
- S13. Vitamin C Infusion for the Treatment of Severe 2019-nCoV Infected Pneumonia - Full Text View - ClinicalTrials.gov.
<https://clinicaltrials.gov/ct2/show/NCT04264533?term=NCT04264533&draw=2&rank=1>. Accessed May 22, 2020.
- S14. Daudon M, Jungers P. Drug-Induced Renal Calculi: Epidemiology, Prevention and Management. *Drugs*. 2004;64(3):245-275. doi:10.2165/00003495-200464030-00003.
- S15. Wan Y, Li J, Shen L, Zou Y, Hou L, Zhu L, Faden HS, Tang Z, Shi M, Jiao N, Li Y, Cheng S, Huang Y, Wu D, Xu Z, Pan L, Zhu J, Yan G, Zhu R, Lan P. Enteric involvement in hospitalised patients with COVID-19 outside Wuhan. *Lancet Gastroenterol Hepatol*. 2020;5(6). doi:10.1016/S2468-1253(20)30118-7.
- S16. Daudon M, Frochot V, Bazin D, Jungers P. Drug-Induced Kidney Stones and Crystalline Nephropathy: Pathophysiology, Prevention and Treatment. *Drugs*. 2018;78(2):163-201. doi:10.1007/s40265-017-0853-7.

Additional figure 1. EDS analysis of crystals: preliminary EDS mapping showed an homogeneous pattern of the atomic with calcium-based matrix (panel A). The stoichiometric ratio was compatible with calcium oxalate monohydrate (CaC_2O_4), even if oxygen was relatively lower expressed than expected (panel B), possibly due to interference of the Na and Cl peaks due to inclusion in NaCl solution. EDS: Energy dispersive X-ray spectrometry; C carbon, O oxygen, Na sodium, Mg magnesium, Si silicon, Cl chloride, Ca calcium.

