**Supplementary material**

The in-patient RT-PCR test detects the RdRp and N genes of the SARS-CoV-2 virus and is sensitive to 100 RNA copies/mL in viral transport media. The test is authorized by the US FDA under Emergency Use Authorization.

The demographic information extracted from the Patient Cohort Explorer (PCE)1 the COVID-19 Research Registry2  included age, gender, and race. All co-morbid conditions (by diagnostic codes) were extracted and reviewed by two reviewers (MES and AHO) to further categorize patients who had comorbidities of interest: hypertension, cardiovascular disease, asthma / chronic obstructive pulmonary disease, heart failure, cancer, stroke, diabetes, obesity, and gastroesophageal reflux disease. We also extracted data on certain medications in use at the time of admission, including proton pump inhibitors (PPIs), H2 receptor antagonists (H2RAs), anti-hypertensives, and statins. To ensure that the comorbidities and medication use occurred at the time of admission, the dates of diagnostic codes and medication use were set to the admission dates for the data extraction.

1. University of Mississippi Medical Center, Center for Informatics and Analytics (2020): Patient Cohort Explorer. figshare. Software. <https://doi.org/10.6084/m9.figshare.12252737>
2. University of Mississippi Medical Center, Center for Informatics and Analytics (2020): COVID-19 Research Registry. figshare. Software.<https://doi.org/10.6084/m9.figshare.12412850.v1>

**Supplementary Table 1.  Primers used for ACE2 expression and SARS-CoV-2 detection**

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| ***ACE2* primers** |  |  |  |
| ß-Actin-Forward: GCCGTGGTGGTGAAGCTGT, Reverse: ACCCACACTGTGCCCATCTA;  |
| ACE2-Forward: AGGCCGAGAAGTTCTTTGTATC, Reverse: AACATTTCCTGGGTCCGTTAG.  |
|  |  |  |  |
| **SARS-CoV-2 primers** |  |  |  |
| 2019-nCoV\_N1-F | 2019-nCoV\_N1 Forward Primer | GAC CCC AAA ATC AGC GAA AT |
| 2019-nCoV\_N1-R | 2019-nCoV\_N1 Reverse Primer | TCT GGT TAC TGC CAG TTG AAT CTG |
| 2019-nCoV\_N1-P | 2019-nCoV\_N1 Probe | FAM-ACC CCG CAT TAC GTT TGG TGG ACC-BHQ1 |