Acute kidney injury (AKI) in hospitalized COVID-19 patients is associated with a poor prognosis. The aim of this study was to identify factors influencing in-hospital mortality. In a retrospective analysis, we included 268 adult patients with RT-PCR-confirmed SARS-CoV-2 infection and AKI admitted to two Emergency University Hospitals during a 6-month period, between 1 November 2020 and 30 April 2021. Data were retrieved from the electronic databases of the two hospitals. We analysed kidney and patient outcomes at discharge and the potential risk factors for mortality in AKI patients. We defined and staged AKI according to KDIGO 2012 creatinine criteria.

**BACKGROUND AND AIMS:** During a 2-year pandemic, COVID-19 proved to be a condition with a high potential to affect various organs other than the lungs. Acute kidney injury (AKI) in hospitalized COVID-19 patients is associated with a poor prognosis. The aim of this study was to identify factors influencing in-hospital mortality.

**METHOD:** In a retrospective analysis, we included 268 adult patients with RT-PCR-confirmed SARS-CoV-2 infection and AKI admitted to two Emergency University Hospitals during a 6-month period, between 1 November 2020 and 30 April 2021. Data were retrieved from the electronic databases of the two hospitals. We analysed kidney and patient outcomes at discharge and the potential risk factors for mortality in AKI patients. We defined and staged AKI according to KDIGO 2012 creatinine criteria.

**RESULTS:** In our cohort the mean age was 72.28 years, 169 (63%) patients were men, and 111 (41.4%) had previously known chronic kidney disease. 81 patients were classified as having stage 1 AKI, 79 patients had stage 2 AKI and 108 had stage 3 AKI. 

| Parameter | Median (IQR) | Survivors | Non-survivors | P       |
|-----------|--------------|-----------|---------------|---------|
| AKI stage |              |           |               |         |
| Stage 1   | 55 (67.9%)   | 26 (32.1%)|               | <.001** |
| Stage 2   | 38 (48.1%)   | 41 (51.9%)|               |         |
| Stage 3   | 40 (37%)     | 68 (63%)  |               |         |
| RRT requirement |      |           |               |         |
| Absent    | 123 (52.1%)  | 113 (47.9%)|               | .037**  |
| Present   | 10 (31.3%)   | 22 (68.8%)|               |         |
| Kidney function recovery | |           |               |         |
| Complete  | 73 (93.6%)   | 5 (6.4%)  |               | <.001** |
| Partial   | 52 (80%)     | 13 (20%)  |               |         |
| None      | 8 (50%)      | 8 (50%)   |               |         |
| ICU admission |      |           |               |         |
| Absent    | 122 (77.7%)  | 35 (22.3%)|               | <.001** |
| Present   | 11 (9.9%)    | 100 (90.1%)|             |         |

**CONCLUSION:** Mortality of COVID-19 patients associating AKI is proportionally augmented by both markers of severity of SarS-CoV-2 and also by severity of AKI. In our study, the peak value of serum urea during hospitalization was the best predictor for death in COVID-19.