Therapeutic Anticoagulation May Be Associated with Reduced 14-day Mortality in Mechanically Ventilated Patients with COVID-19

Supplementary Material
Purpose/Objectives

Primary Objective:
- The primary objective of this study is to assess the 14-day mortality in mechanically ventilated patients who received anticoagulation for COVID-19.
  - Therapeutic anticoagulation (defined as at least 72 hours of therapeutic anticoagulation received)
  - Prophylactic anticoagulation (defined as at least 72 hours of prophylactic anticoagulation received)

Secondary Objectives:
- 30-day mortality
- Duration of mechanical ventilation
- Hospital length of stay
- Major bleeding (defined as hemoglobin <7 g/dL and any red blood cell transfusion, at least two units of red blood cell transfusion within 48 hours or a diagnosis code for major bleeding including intracranial hemorrhage, hematemesis, melena, peptic ulcer with hemorrhage, colon, rectal, or anal hemorrhage, hematuria, ocular hemorrhage, and acute hemorrhagic gastritis)
- New thromboembolic event

Inclusion / Exclusion Criteria:

Inclusion Criteria:
- Mechanical ventilated ICU patients ≥ 18 years old
- Positive SARS-CoV-2 PCR test during current admission
- Received heparin or heparin derivatives

Exclusion Criteria:
- Patients on less than 72 hours of mechanical ventilation
- Patients who received anticoagulation for any other indication
- Patients on anticoagulation prior to admission
- Patients transferred in from another acute care facility
- Pregnancy/peripartum period
### Supplementary Table 1: Other COVID-19 experimental treatments$^a$

| Other Treatment                | Prophylactic (n=34) | Therapeutic (n=33) | P-value |
|-------------------------------|---------------------|--------------------|---------|
| Azithromycin, n (%)           | 8, (23.5%)          | 6, (18.2%)         | 0.765   |
| Hydroxychloroquine, n (%)     | 12, (35.3%)         | 11, (33.3%)        | 1       |
| Methylprednisolone, n (%)     | 14, (41.2%)         | 23, (69.7%)        | 0.027   |
| CD24 Antibody, n (%)          | 2, (5.9%)           | 0, (0%)            | 0.493   |
| Convalescent Plasma, n (%)    | 5, (14.7%)          | 15, (45.5%)        | 0.008   |
| Remdesivir, n (%)             | 1, (2.9%)           | 2, (6.1%)          | 0.614   |

$^a$Data are presented number (percent) of patients, unless specified otherwise

### Supplementary Table 2: Stratification of bleeding events$^a$

| Bleeding Stratification                | Prophylactic (n=7) | Therapeutic (n=22) |
|---------------------------------------|--------------------|--------------------|
| Hemoglobin <7 mg/dL and PRBC Administration, n (%) | 4, (57.1%)        | 15, (68.2%)       |
| Gastrointestinal Bleed, n (%)         | 3, (42.9%)         | 3, (13.6%)         |
| Hematuria, n (%)                      | 0, (0%)            | 3, (13.6%)         |
| Epistaxis, n (%)                      | 0, (0%)            | 1, (0.046%)        |

$^a$Data are presented number (percent) of patients, unless specified otherwise

### Supplementary Table 3: Stratification of thromboembolic events$^a$

| Thrombotic Event Stratification      | Prophylactic (n=6) | Therapeutic (n=3) |
|--------------------------------------|--------------------|------------------|
| Brain Infarct (confirmed on CT), n (%)| 2, (33.3%)         | 1, (33.3%)       |
| Suspected Pulmonary Embolism, n (%)  | 3, (50%)           | 0, (0%)          |
| Deep Vein Thrombosis (confirmed on US), n (%) | 1, (16.7%) | 2, (66.7%) |

$^a$Data are presented number (percent) of patients, unless specified otherwise