

## 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.
  - o Therapeutic anticoagulation (defined as at least 72 hours of therapeutic anticoagulation received)
  - o 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  $\geq 18$  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<sup>a</sup>**

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

<sup>a</sup>Data are presented number (percent) of patients, unless specified otherwise

**Supplementary Table 2: Stratification of bleeding events<sup>a</sup>**

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

<sup>a</sup>Data are presented number (percent) of patients, unless specified otherwise

**Supplementary Table 3: Stratification of thromboembolic events<sup>a</sup>**

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

<sup>a</sup>Data are presented number (percent) of patients, unless specified otherwise