Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

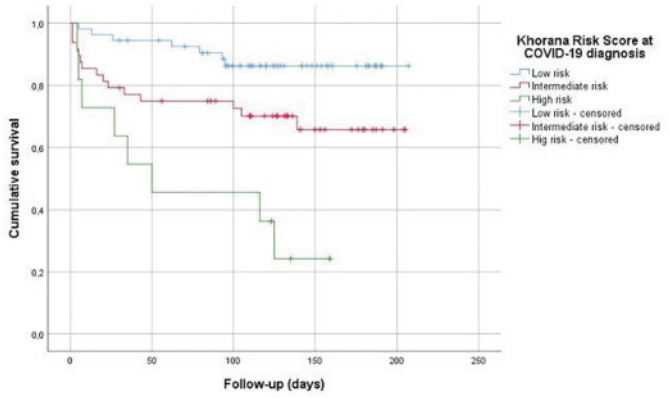

Fig. 1 (abstract OC-02). Khorana risk score at COVID-19 diagnosis.

advanced disease, 2.7% (n = 3) localized disease, and 26.5% (n = 30) were in complete remission. 69% of patients required hospitalization and 62.8% received thromboprophylaxis. Patients were distributed in low (n = 54), intermediate (n = 48) and high (n = 11) risk according to Khorana score. Cumulative incidence of VTE was 1.9% (n = 1) for low risk patients, 4.2% (n = 2) for intermediate risk patients and 18.2% (n = 2) for high risk patients. Fisher's exact test did not show statistically significant differences among groups (p = 0.09). All-cause mortality rate was 13% (n = 7), 31.2% (n = 15) and 72.7% (n = 8) in low, intermediate and high risk groups, respectively. Survival curves are shown in Figure 1. Log-Rank test demonstrated statistically significant differences (p < 0.01) among groups.

Conclusions: In our study, incidence of VTE raised as Khorana score did at diagnosis of COVID-19. However, statistical significance could not be demonstrated. Khorana score also significantly predicted mortality rate, suggesting it could work as an easy-to-calculate tool able to provide useful prognostic information at COVID-19 diagnosis in cancer patients.

OC-03

Heparin treatment in COVID-19 patients is associated with reduced in-hospital mortality: findings from an observational multicenter study in Italy and a meta-analysis of 11 studies

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Introduction: A hypercoagulable condition was described in patients with COVID-19 and proposed as a possible pathogenic mechanism contributing to disease progression and lethality.

Aim: We evaluated if in-hospital heparin treatment may improve survival in a large cohort of Italian hospitalized COVID-19 patients, in the framework of the CORIST collaborative project. We also carried out a meta-analysis of relevant studies.

Materials and Methods: In a retrospective observational study, 2,574 unselected patients with laboratory confirmed SARS-CoV-2 infection, hospitalized in 30 clinical centres in Italy from February to May 2020, were analysed. The primary endpoint in a time-to event analysis was in-hospital death. We used multivariable Cox proportional-hazards regression models with inverse probability for treatment weighting by propensity scores, with the addition of subgroup analyses. Articles for the meta-analysis were retrieved until January 8th 2021 by searching

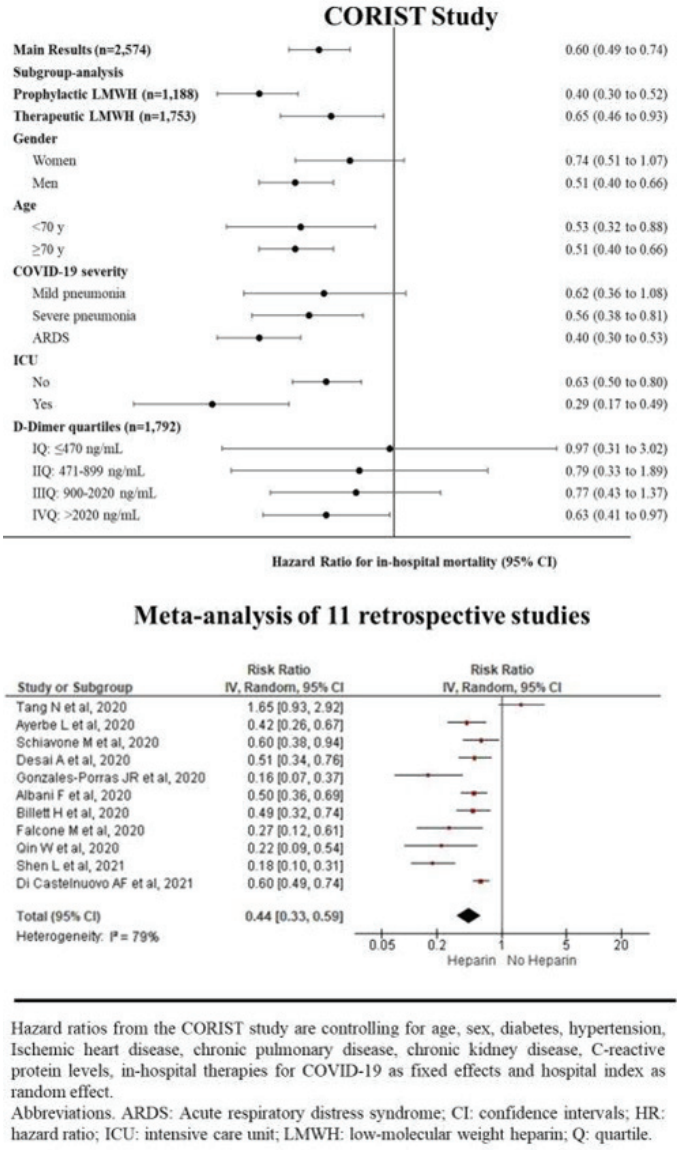

Fig. 1 (abstract OC-03). Hazard ratios for in-hospital mortality according to heparin use.

in web-based libraries and data were combined using the general variance-based method.

Results: Out of 2,574 COVID-19 patients, 70% received heparin. Death rates for patients receiving heparin or not were 7.4 and 14.0 per 1000 person-days, respectively. After adjustment for propensity scores, a 40% lower risk of death was observed in patients receiving heparin (HR: 0.60, 95% CI: 0.49-0.74; figure). The inverse association of heparin with in-hospital death was particularly evident in patients with a higher severity of disease or a strong coagulation activation (as estimated by D-dimer). Results from the meta-analysis (11 retrospective studies; 11,586 hospitalized COVID-19 patients) confirmed the inverse association (pooled RR: 0.44, 95% CI: 0.33-0.59, I2: 79%; figure). In addition, both prophylactic and therapeutic regimens were effective in reducing mortality. Particularly in intensive care unit (ICU) patients, therapeutic regimen was associated with a reduced in-hospital mortality risk (pooled RR: 0.30, 95% CI: 0.15-0.60; I2: 58%) compared to the prophylactic one. However, the former was associated with higher risk of bleeding (pooled RR: 2.53, 95%CI: 1.60-4.00; I2: 65%).

Conclusions: Heparin use reduced all-cause mortality in COVID-19 patients during hospitalization. Both regimens were associated with a better survival in COVID-19 patients, therapeutic dosages at a higher

extent than prophylactic, particularly in ICU patients. However, due to the higher risk of bleeding at therapeutic doses, in non-critically ill COVID-19 patients, the use of prophylactic dosages is probably to be preferred. Given the observational design of these studies, however, these findings should still be treated cautiously. The results from randomised clinical trials are eagerly awaited to provide clear recommendations.