

# CRITICAL COVID-19 PATIENTS THROUGH FIRST, SECOND AND THIRD WAVE:

## RETROSPECTIVE OBSERVATIONAL STUDY COMPARING OUTCOMES IN ICU

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### BACKGROUND

Each wave of SARS-COV2 pandemic characterized by progressive awareness of the pathophysiology of this disease

### AIM

Whether these improvements led to improvement in outcomes of COVID-19 patients admitted to ICU

### METHODS

Consecutive COVID19 patients admitted to the ICUs of Modena Hospital. Patients were divided in three waves based on the admission period.

**POPULATION: 428 patients**

#### 1<sup>st</sup> WAVE

Feb 25<sup>th</sup> 2020 to Jul 6<sup>th</sup>, 2020

**102 patients**

**Hospital mortality: 35 (34,3%)**

#### 2<sup>nd</sup> WAVE

Sept 20<sup>th</sup>, 2020 to Feb 13<sup>th</sup>, 2021

**169 patients**

**Hospital mortality: 62 (36,7%)**

#### 3<sup>rd</sup> WAVE

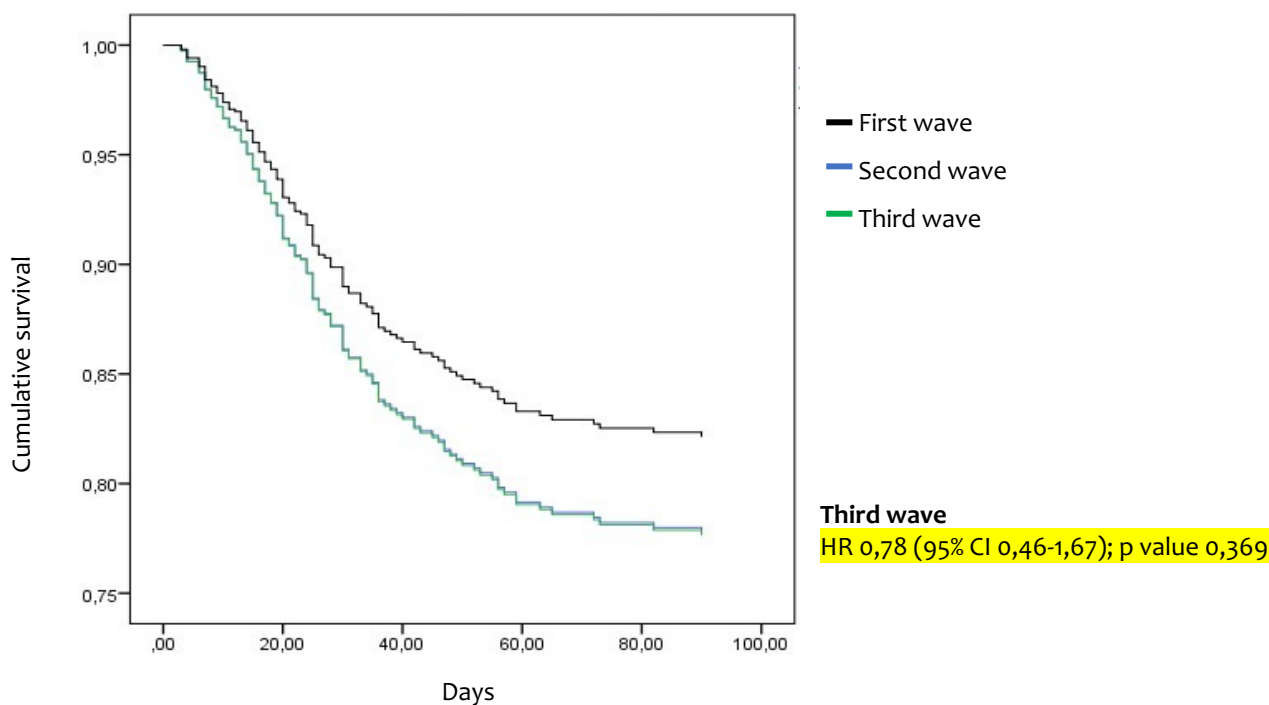
Feb 14<sup>th</sup>, 2021 to Apr 30<sup>th</sup>, 2021

**157 patients**

**Hospital mortality: 39 (24,8%)**

**P value for hospital mortality=0,059**

**Figure.** Adjusted Cox regression analysis for in-hospital mortality censored at day 90. Adjustment for: SAPS II score, age, comorbidities, platelet count, LDH, CRP, bacterial infection occurrence, dexamethasone administration and invasive mechanical ventilation.



### CONCLUSIONS

Our study failed to demonstrate a significant improvement in survival rate when comparing the different waves in both the whole population and in invasively ventilated patients. Rather, we intercepted the possible protective effect of dexamethasone on mortality in the three waves.