# INCIDENCE OF COVID–19 ASSOCIATED PULMONARY ASPERGILLOSIS (CAPA) IN THE ICU DURING THE FIRST (2020) AND SECOND (2021) PANDEMIC WAVES. THE VERONESE EXPERIENCE

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## INTRODUCTION

Invasive Pulmonary Aspergillosis is an emerging complication among ICU patients with COVID–19 pneumonia (CAPA). Recently published data reported an incidence of 3 – 15%, describing it in immunocompetent patients undergoing to long term IMV, subsequent to broad–spectrum antibiotic therapy, to the outgrowth of MDR microorganisms and significantly associated with poor outcome (48%). In ICU patients, besides demographic characteristics and comorbidities, risk factors have been identified in the use of CRRT alone or coupled with V–V ECMO treatments, high dose steroids, EORTC host risk factors and immunosuppressive drugs and in the ICU room negative atmospheric pressure.

## OBJECTIVES

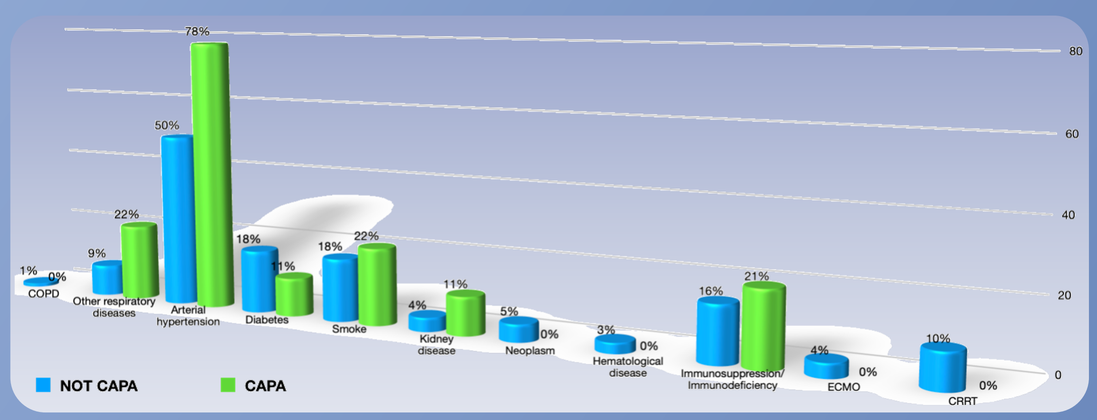
The aim of our study was to analyze the incidence of CAPA in our ICUs during the first (2020) and the second (2021) pandemic waves.

## METHODS

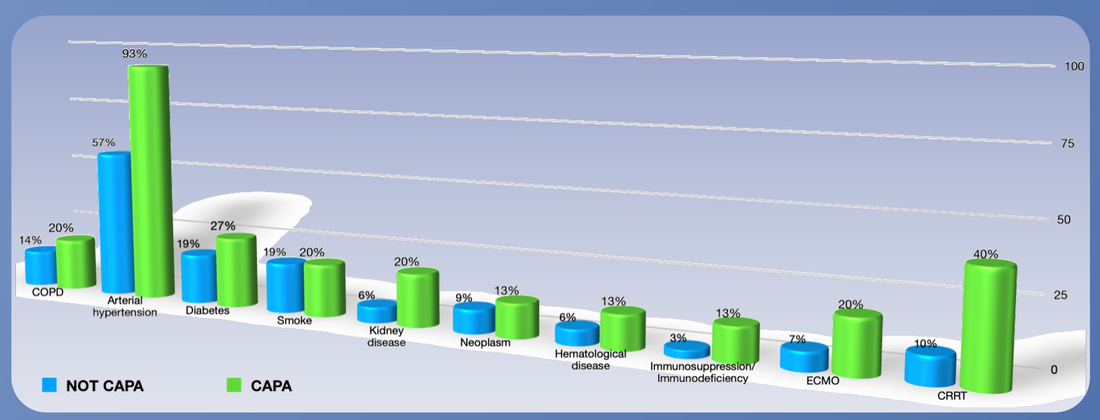
This is a retrospective study performed on 334 pts (122 + 212 pts), belonging to the REINSURE ARDS Registry. Risk factors, cumulative incidence of CAPA and patients' mortality have been registered.

## RESULTS

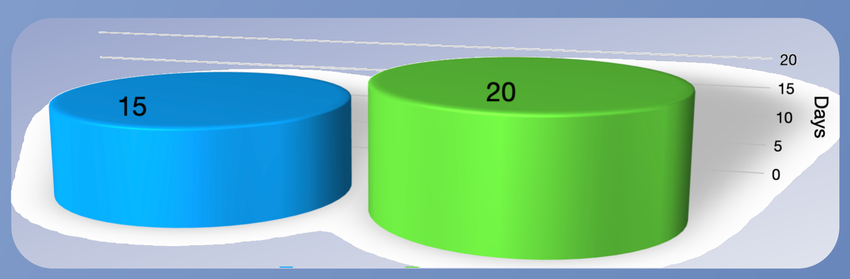
The cumulative incidence of aspergillosis was 7.4% and 7.1% during the first and second wave, respectively. The identified risk factors presented a relative burden. Mortality of patients with CAPA was 11% and 93% during the first and second wave, respectively.



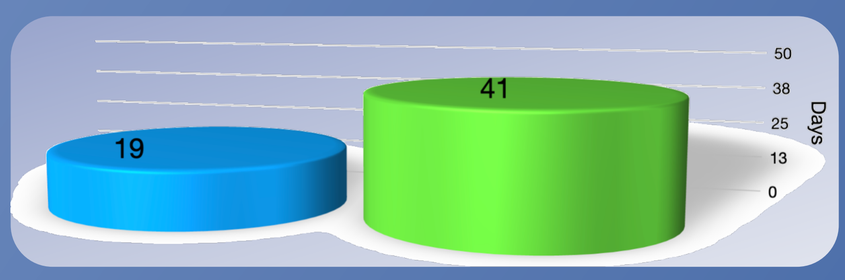

Risk factors frequency in patients presenting CAPA and not, in the 1st **COVID wave**



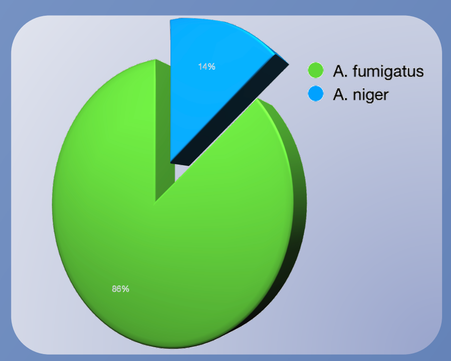

Risk factors frequency in patients presenting CAPA and not, in the 2nd **COVID wave**



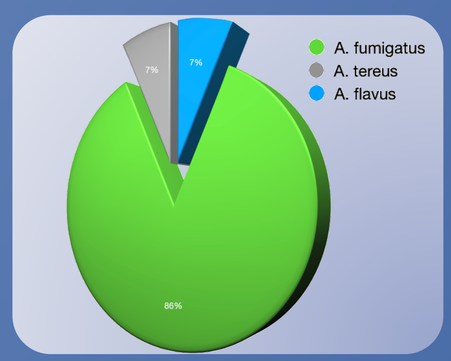

LOS in UTI of patients presenting CAPA and not, in the 1st **COVID wave**




LOS in UTI of patients presenting CAPA and not, in the 2nd **COVID wave**




Frequencies of *Aspergillus species* isolated in the 1st **COVID wave**




Frequencies of *Aspergillus species* isolated in the 2nd **COVID wave**

## CONCLUSIONS

Our results comfirm published international data about the incidence of CAPA in ICU. Identified risk factors are similarly implicated.

## REFERENCES

*1) Risk factors for invasive aspergillosis in ICU patients with COVID–19: current insights and new key elements* C. Montrucchio et al. – Annals of Intensive Care, (2021)11:136.

*2) COVID–19–Associated pulmonary Aspergillosis (CAPA)* G. Dimopoulos et al. – Journal of Intensive Medicine, November 1, 2021; 20–28.

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