

# CLINICAL CHARACTERISTICS ANTICIPATE MORTALITY RISK IN ELDERLY PATIENTS WITH COVID-19

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## Abstract

Since December 2019, there is immersive increase in number of coronavirus disease (COVID-19) deaths worldwide. There are approximately 4, 23, 217 death as of now and it may increase further these deaths, more than 90% are people aged 60 and older. Therefore, there is a need for accessing easy to use clinically predictive tool for anticipates mortality risk in elderly individuals with COVID-19.

**Keywords:** Covid-19; Elderly patients; Mortality rate; rRT-PCR; transcription mediated amplification;

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## Introduction

The COVID-19 pandemic has affected millions of people all over the world and caused hundreds of thousands of deaths. Anticipating mortality among patients with COVID-19 who present with a range of complications is very complicated, prohibit, predict and management of the disease. Our objective is to develop an accurate prediction model of COVID-19 and check the mortality using unbiased computational methods, and identify the clinical characteristics most predictive of this outcome. A retrospective analysis of 118 older patients with COVID-19 admitted was examined. The main results of epidemiological, demographic, clinical and laboratory tests samples were collected and compared between dying and discharged patients sequentially.

## Case Presentation

Covid-19 is a contagious disease caused by acute respiratory syndrome coronavirus 2(SARS-CoV-2). It is the first case identified in Wuhan, China, in December 2019. The disease has spread rapidly worldwide, leading to ongoing pandemic.

COVID-19 transmits when people breathe in air

contaminated by droplets of effected patient. The risk of breathing these in is high when people are in close spectrum, but they can be inhaled over longer distances, particularly indoors. Transmission can also occur if the affected person contaminates the surroundings with fluids, through the nose or mouth. People remain contagious for up to 20 days, and can spread the virus even if they don't have any symptoms. Several testing methods are been developed to diagnose the disease. The standard diagnostic method is by detection of the virus through real time reverse transcription polymerase chain reaction (rRT-PCR), transcription mediated amplification (TMA) or by reverse transcription loop mediated isothermal amplification (RT-LAMP) from a nasopharyngeal swab.

## Method

Elder patients suffering with COVID-19 were divided into two groups, namely, survival and death groups. Study population gives detailed explanation about methods of the R statistics package and Empower (R) statistical software were initially used to compare risk factors of mortality rate. Proportion with SD was used to distinguish the patient sample. If the variable was uninterrupted, then

it was obtained by the Kruskal Wallis rank sum test. If the count variable had a theoretical number less than 10, then it was taken from the Fisher exact probability test.

Continuous variables were distinguished and kept for multivariate testing. Cut off points were identified continued by the Youden index of receiver operator characteristic (ROC) curve or a clinically relevant cut off. All variables were as potential risk factors and included in multivariate regression analysis against overall mortality adjusted for age, sex, disturbance of consciousness, abnormal gait, hypertension, coronary heart disease, diabetes, chronic bronchitis etc.

Score performance characterized was evaluated by measuring the area under ROC curve (AUROC), sensitivity

and specificity. Internal validation is evaluated by AUROC of 500 bootstrapped samples. Statistical analysis works by using SPSS version 16.0 and R 3.4.3. All tests were two sided, and variation with a p value <.05 were considered statistically important.

There is no major change of symptoms were seen between dying and discharged patients. Among the reports obtained laboratory from tests.

## Conclusion

We designed an easy to use clinically anticipating tool for early recognition treatment of elderly patients with suffering from COVID-19.