

# EFFECT OF CANCER COMORBIDITY ON THE MORTALITY IN COVID-19 PATIENTS: A META-ANALYSIS

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## ABSTRACT

**Background:** COVID-19 first appeared in Wuhan China in December 2019 and then spread around the world, causing the coronavirus disease 2019 (COVID-19) pandemic. Mortality risk factors for COVID-19 patients depend on several factors such as age, gender, and comorbid diseases. Most comorbid diseases associated with increased COVID-19 mortality consist of hypertension, cancer, diabetes, obesity, cardiovascular disease, chronic obstructive pulmonary disease (COPD), chronic kidney disease, and asthma. This study aimed to analyze the effect of cancer comorbidities on the mortality of COVID-19 patients.

**Subjects and Method:** This was a meta-analysis study using PRISMA flowchart guidelines. The article search was carried out by collecting published studies between 2020 and 2021 from Science Direct, PubMed, Google Scholar, and Scopus databases. The following search terms were used: “Cancer” AND “Mortality OR Death” AND (COVID-19 OR SARS-CoV-2 OR Novel Coronavirus Disease)”. The articles were filtered using PICO model, including: (1) population= COVID-19 patients; (2) intervention= cancer comorbidities; (3) intervention: without cancer comorbidities; and (4) outcome: mortality. The inclusion criteria was cohort study which reported adjusted odds ratio (aOR). Quantitative data analysis performed using RevMan 5.3.

**Results:** A meta-analysis involved 12 studies from Spain, France, Ireland, United Kingdom, United States, Nigeria, Mexico, and Turkey. This study showed that cancer comorbid increased the mortality risk of COVID-19 patients and it was statistically significant (aOR= 1.33; 95% CI= 0.83 to 2.07;  $p < 0.001$ ).

**Conclusion:** Cancer comorbidities increase the mortality risk of COVID-19 patients.

**Keywords:** cancer, comorbidity, mortality, COVID-19, SARS-CoV 2.

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