

# THE BEST OF THE WEEK (20 giu – 26 giu 2022)

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## **Outcomes of the SARS-CoV-2 omicron (B.1.1.529) variant outbreak among vaccinated and unvaccinated patients with cancer in Europe: results from the retrospective, multicentre, OnCovid registry study**

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### **Abstract**

**Background** The omicron (B.1.1.529) variant of SARS-CoV-2 is highly transmissible and escapes vaccine-induced immunity. We aimed to describe outcomes due to COVID-19 during the omicron outbreak compared with the prevaccination period and alpha (B.1.1.7) and delta (B.1.617.2) waves in patients with cancer in Europe.

**Methods** In this retrospective analysis of the multicentre OnCovid Registry study, we recruited patients aged 18 years or older with laboratory-confirmed diagnosis of SARS-CoV-2, who had a history of solid or haematological malignancy that was either active or in remission. Patients were recruited from 37 oncology centres from UK, Italy, Spain, France, Belgium, and Germany. Participants were followed up from COVID-19 diagnosis until death or loss to follow-up, while being treated as per standard of care. For this analysis, we excluded data from centres that did not actively enter new data after March 1, 2021 (in France, Germany, and Belgium). We compared measures of COVID-19 morbidity, which were complications from COVID-19, hospitalisation due to COVID-19, and requirement of supplemental oxygen and COVID-19-specific therapies, and COVID-19 mortality across three time periods designated as the prevaccination (Feb 27 to Nov 30, 2020), alpha-delta (Dec 1, 2020, to Dec 14, 2021), and omicron (Dec 15, 2021, to Jan 31, 2022) phases. We assessed all-cause case-fatality rates at 14 days and 28 days after diagnosis of COVID-19 overall and in unvaccinated and fully vaccinated patients and in those who received a booster dose, after adjusting for country of origin, sex, age, comorbidities, tumour type, stage, and status, and receipt of systemic anti-cancer therapy. This study is registered with ClinicalTrials.gov, NCT04393974, and is ongoing.

**Findings** As of Feb 4, 2022 (database lock), the registry included 3820 patients who had been diagnosed with COVID-19 between Feb 27, 2020, and Jan 31, 2022. 3473 patients were eligible for inclusion (1640 [47.4%] were women and 1822 [52.6%] were men, with a median age of 68 years [IQR 57–77]). 2033 (58.5%) of 3473 were diagnosed during the prevaccination phase, 1075 (31.0%) during the alpha-delta phase, and 365 (10.5%) during the omicron phase. Among patients diagnosed during the omicron phase, 113 (33.3%) of 339 were fully vaccinated and 165 (48.7%) were boosted, whereas among those diagnosed during the alpha-delta phase, 152 (16.6%) of 915 were fully vaccinated and 21 (2.3%) were boosted. Compared with patients diagnosed during the prevaccination period, those who were diagnosed during the omicron phase had lower case-fatality rates at 14 days (adjusted odds ratio [OR] 0.32 [95% CI 0.19–0.61] and 28 days (0.34 [0.16–0.79]), complications due to COVID-19 (0.26 [0.17–0.46]), and hospitalisation due to COVID-19 (0.17 [0.09–0.32]), and had less requirements for COVID-19-specific therapy (0.22 [0.15–0.34]) and oxygen therapy (0.24 [0.14–0.43]) than did those diagnosed during the alpha-delta phase. Unvaccinated patients diagnosed during the omicron

phase had similar crude case-fatality rates at 14 days (ten [25%] of 40 patients vs 114 [17%] of 656) and at 28 days (11 [27%] of 40 vs 184 [28%] of 656) and similar rates of hospitalisation due to COVID-19 (18 [43%] of 42 vs 266 [41%] of 652) and complications from COVID-19 (13 [31%] of 42 vs 237 [36%] of 659) as those diagnosed during the alpha-delta phase.

**Interpretation** Despite time-dependent improvements in outcomes reported in the omicron phase, compared with the earlier phases of the pandemic, patients with cancer remain highly susceptible to SARS-CoV-2 if they are not vaccinated against SARS-CoV-2. Our findings support universal vaccination of patients with cancer as a protective measure against morbidity and mortality from COVID-19.

P. Bastard et al.

**Autoantibodies against type I IFNs in patients with life-threatening COVID-19**

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**Abstract**

Interindividual clinical variability is vast in humans infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), ranging from silent infection to rapid death. Three risk factors for life-threatening coronavirus disease 2019 (COVID-19) pneumonia have been identified—being male, being elderly, or having other medical conditions—but these risk factors cannot explain why critical disease remains relatively rare in any given epidemiological group. Given the rising toll of the COVID-19 pandemic in terms of morbidity and mortality, understanding the causes and mechanisms of life-threatening COVID-19 is crucial.