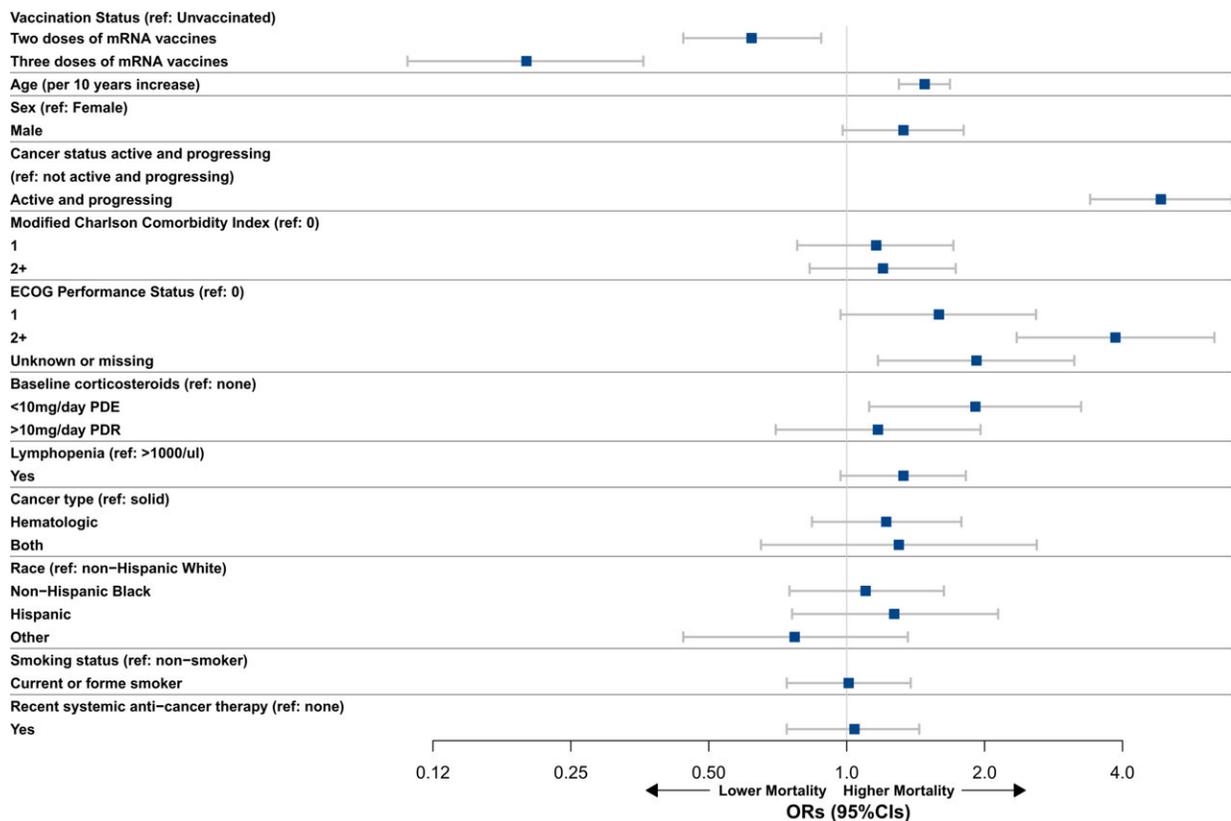


# Three doses of COVID-19 mRNA vaccine associated with better outcomes for patients with cancer

February 17 2023



Forest plot showing results of the multivariable logistic regression analysis following IPTW for the primary endpoint of 30-day mortality among patients with cancer and COVID-19. CI: confidence interval; ECOG PS: Eastern Cooperative Oncology Group performance status; OR: odds ratio; PDE: prednisone dose equivalent; ref: reference. Credit: *The Lancet Regional Health - Americas* (2023). DOI: 10.1016/j.lana.2023.100445

Breakthrough SARS-CoV-2 infections following vaccination against COVID-19 are of international concern and patients with cancer are highly vulnerable and susceptible to poor outcomes.

It is recommended that [patients](#) with [cancer](#) receive a 3-dose COVID-19 vaccination series but it is noted that their immunological response to the vaccine series may be lessened, notably among those with hematologic malignancies.

Utilizing data from the multi-institutional COVID-19 and Cancer Consortium (CCC19) scientists found vaccination with 2 or 3 doses of an mRNA vaccine prior to infection was associated with improved outcomes for patients with cancer diagnosed with COVID-19 in 2021 or 2022. Across all endpoints, including 30-day mortality, ICU admission and hospitalization, the vaccine benefit was most pronounced for those patients receiving 3 doses.

This study shows vaccination against COVID-19 is an essential strategy to improve outcomes in this high-risk population. The results support guidelines that patients with cancer should receive at least 3 COVID-19 vaccine doses.

This analysis represents one of the largest cohorts with comprehensive clinical and [biological data](#) on vaccinated patients with cancer and breakthrough COVID-19 to date and is one of the first studies to evaluate breakthrough infections following the receipt of 3 doses of mRNA vaccines among patients with cancer.

The findings are published in *The Lancet Regional Health—Americas*.

**More information:** Toni K. Choueiri et al, Breakthrough SARS-

CoV-2 infections among patients with cancer following two and three doses of COVID-19 mRNA vaccines: a retrospective observational study from the COVID-19 and Cancer Consortium, *The Lancet Regional Health—Americas* (2023). [DOI: 10.1016/j.lana.2023.100445](https://doi.org/10.1016/j.lana.2023.100445)

Provided by Dana-Farber Cancer Institute

Citation: Three doses of COVID-19 mRNA vaccine associated with better outcomes for patients with cancer (2023, February 17) retrieved 8 May 2024 from <https://medicalxpress.com/news/2023-02-doses-covid-mrna-vaccine-outcomes.html>

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