

Global Health Cast 32

April 4, 2023



Dr. Melvin Sanicas



Prof. Dr. Joe Schmitt

Every Week

12.00 noon - CET

What we talk about today

- **COVID-19 update**
- **Roadmap for COVID-19 vaccination in the Omicron era**
- **Long COVID could involve factors other than SARS-CoV-2 infection**
- **Whom to give SARS-COV2 boosters**
- **No increased risk for cardiovascular events after bivalent COVID19 vaccine**
- **COVID19 vaccines: different efficacy for different outcomes**

Figure 1. COVID-19 cases reported by WHO Region, and global deaths by 28-day intervals, as of 26 March 2023**

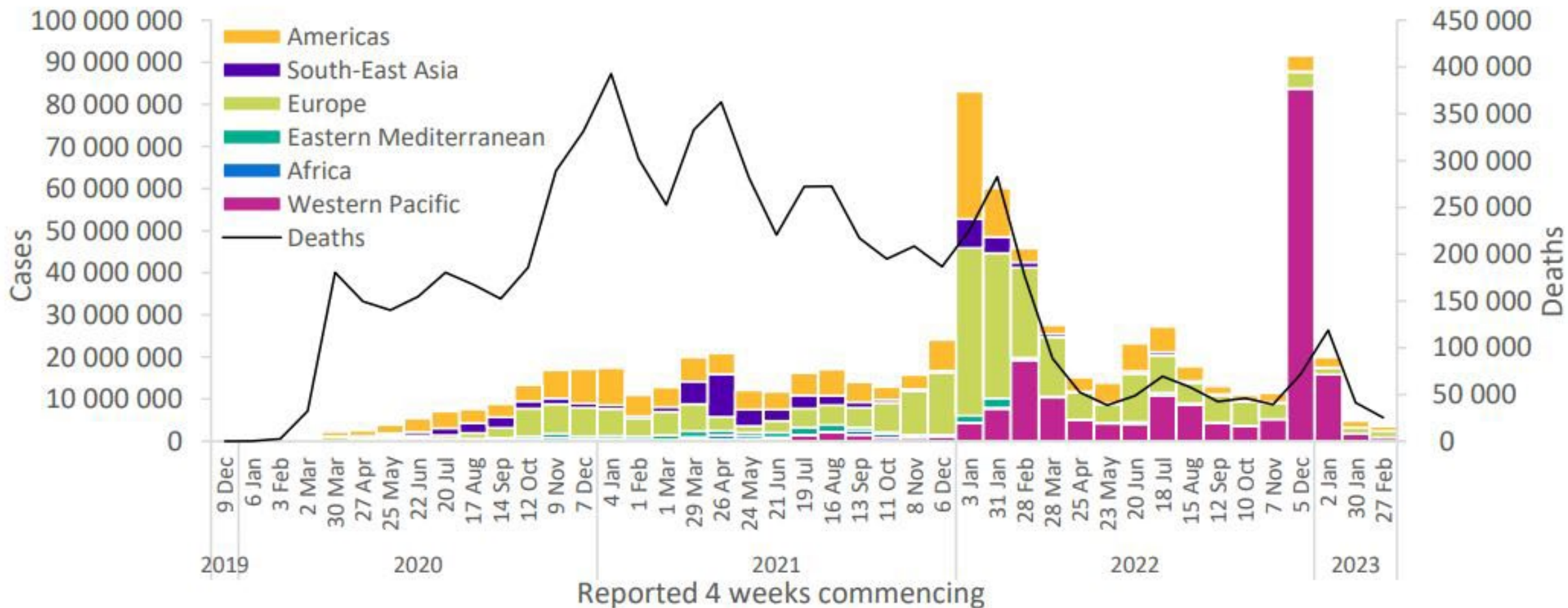


Figure 2. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 26 March 2023**

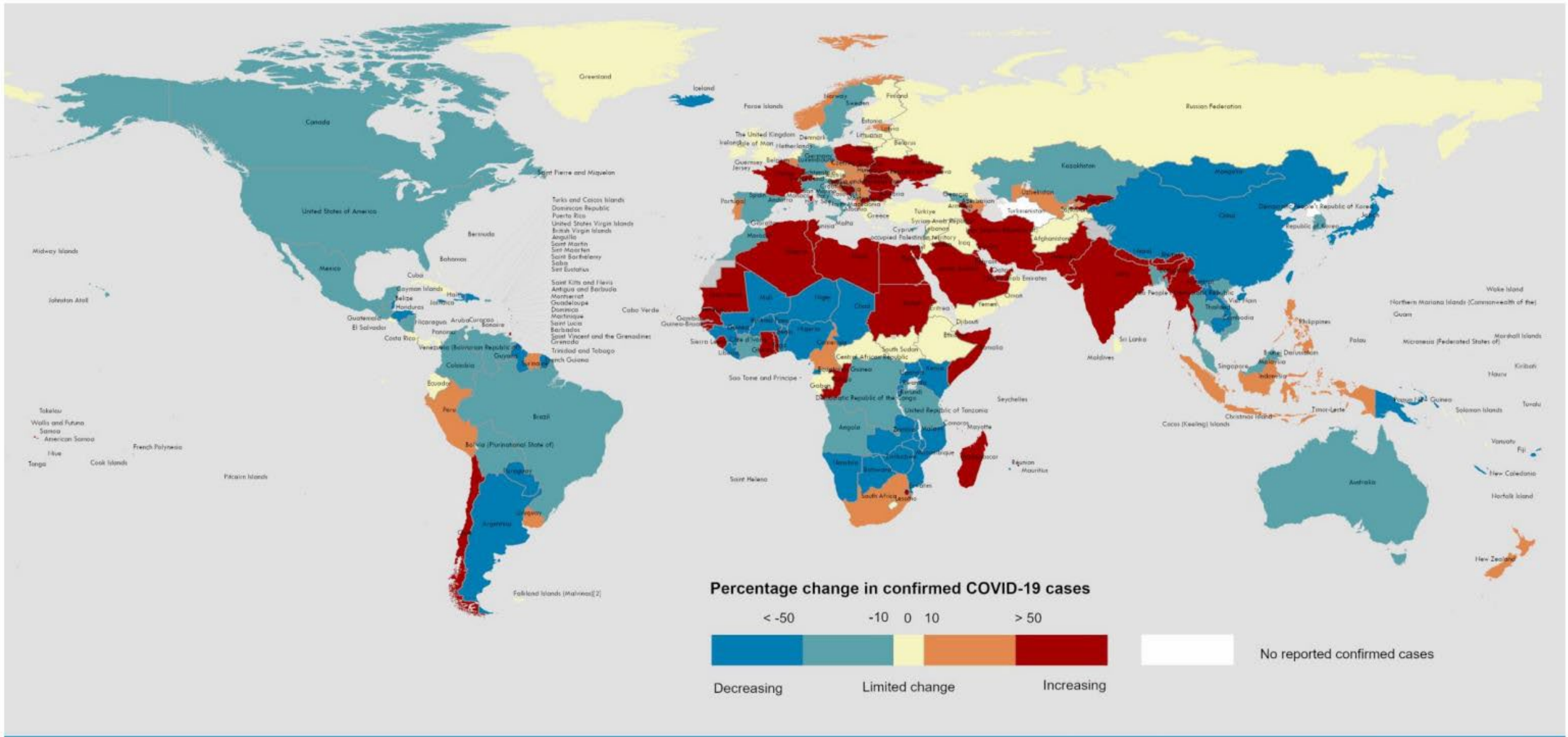


Figure 3. Percentage change in confirmed COVID-19 deaths over the last 28 days relative to the previous 28 days, as of 26 March 2023**

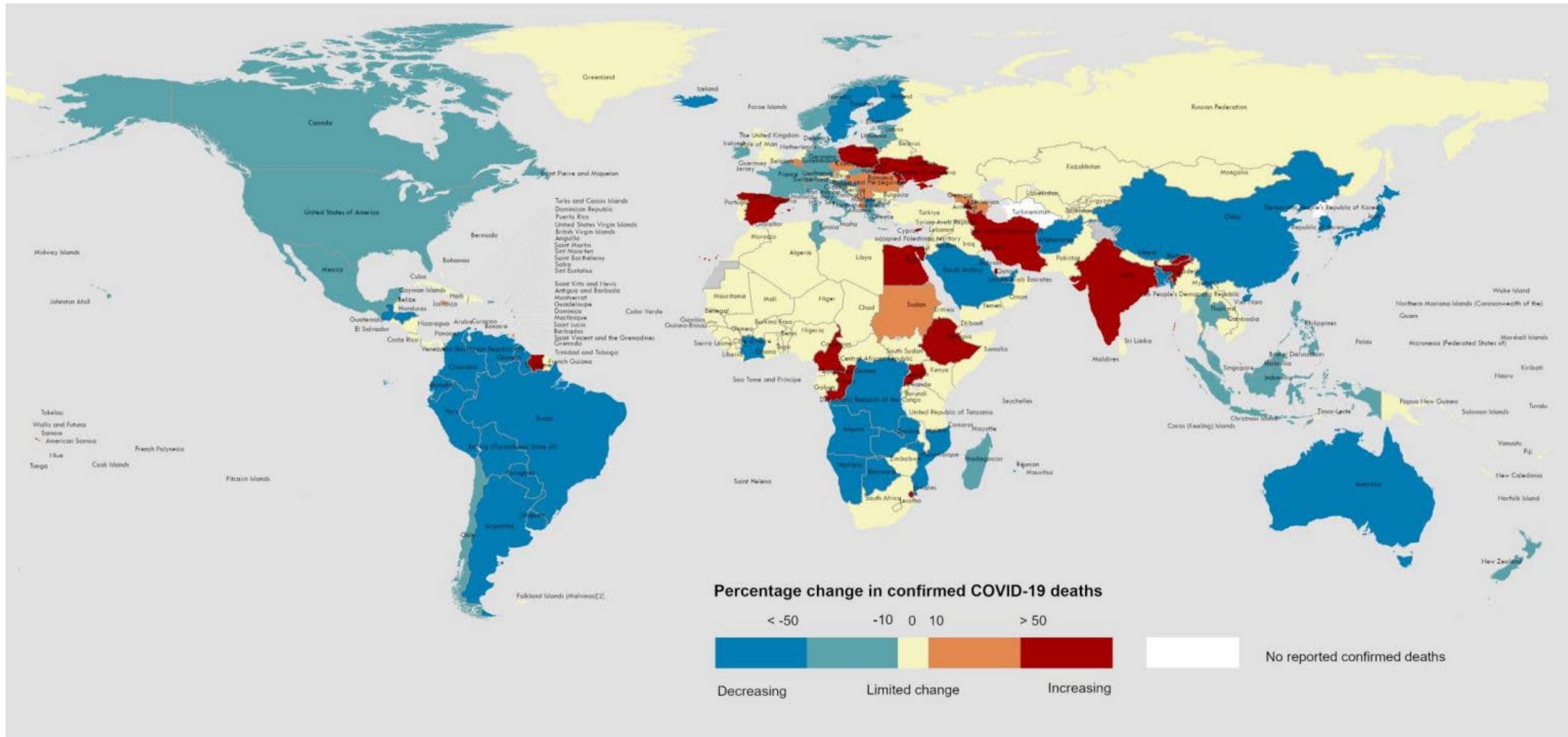
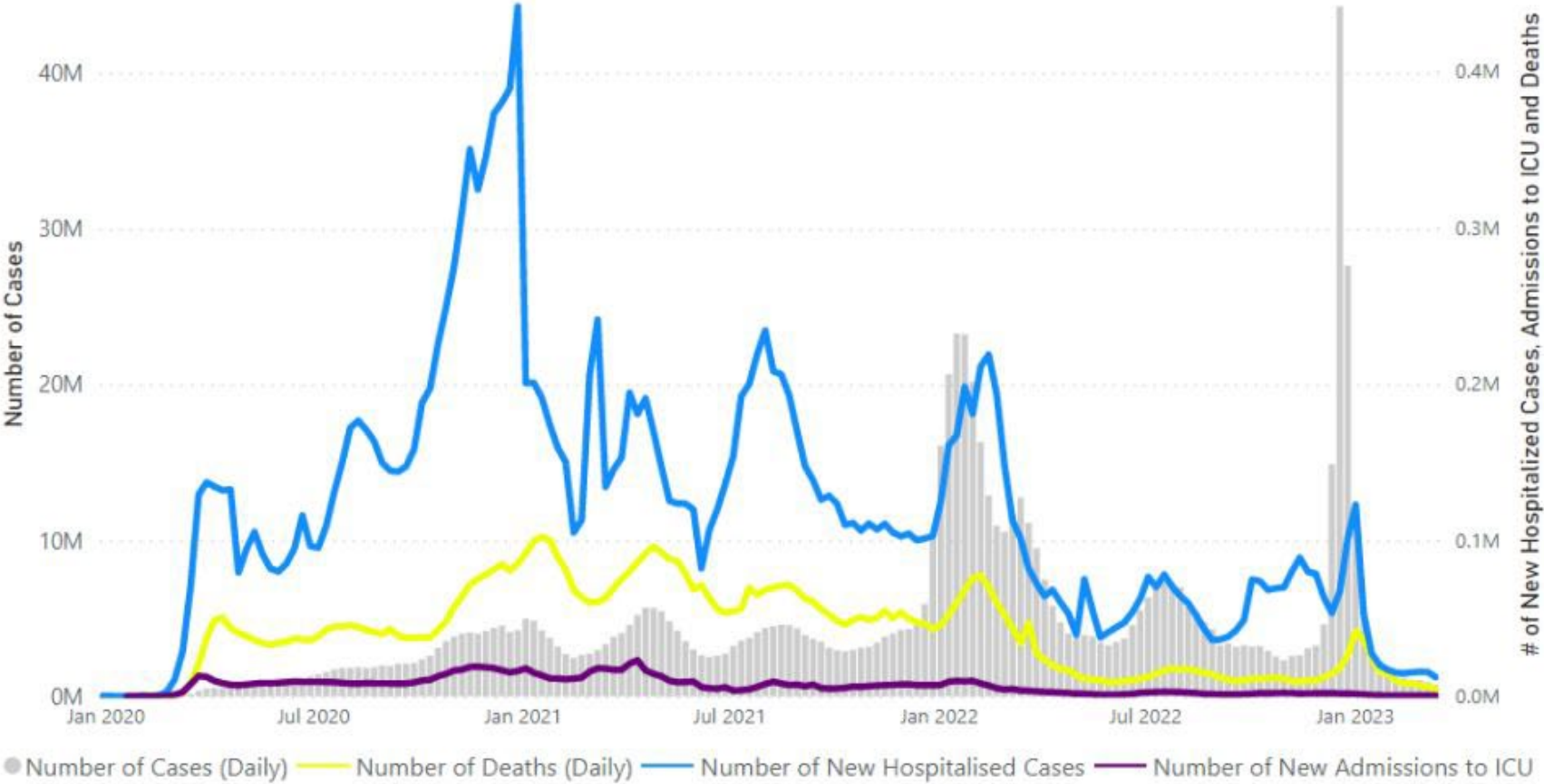
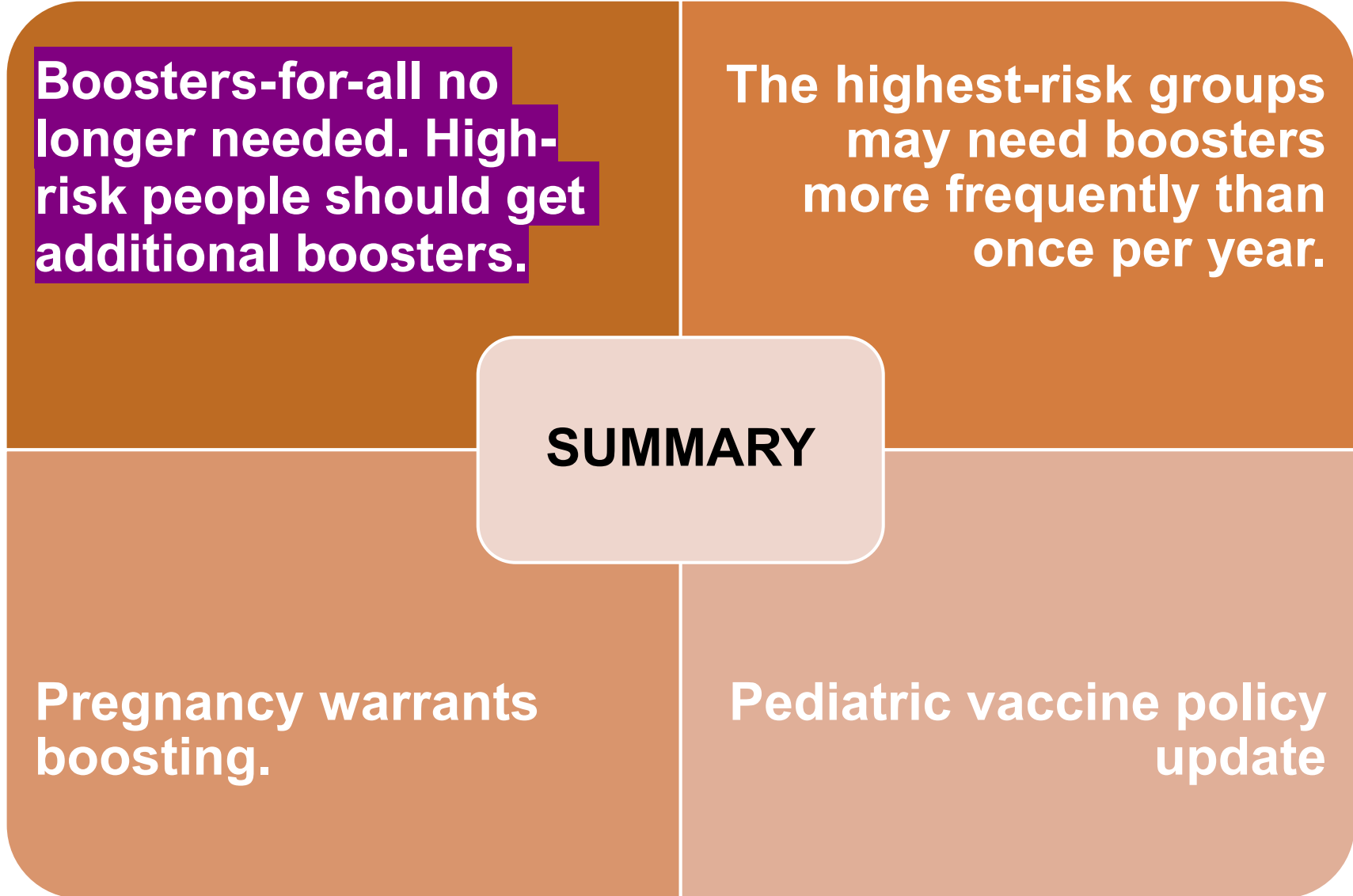


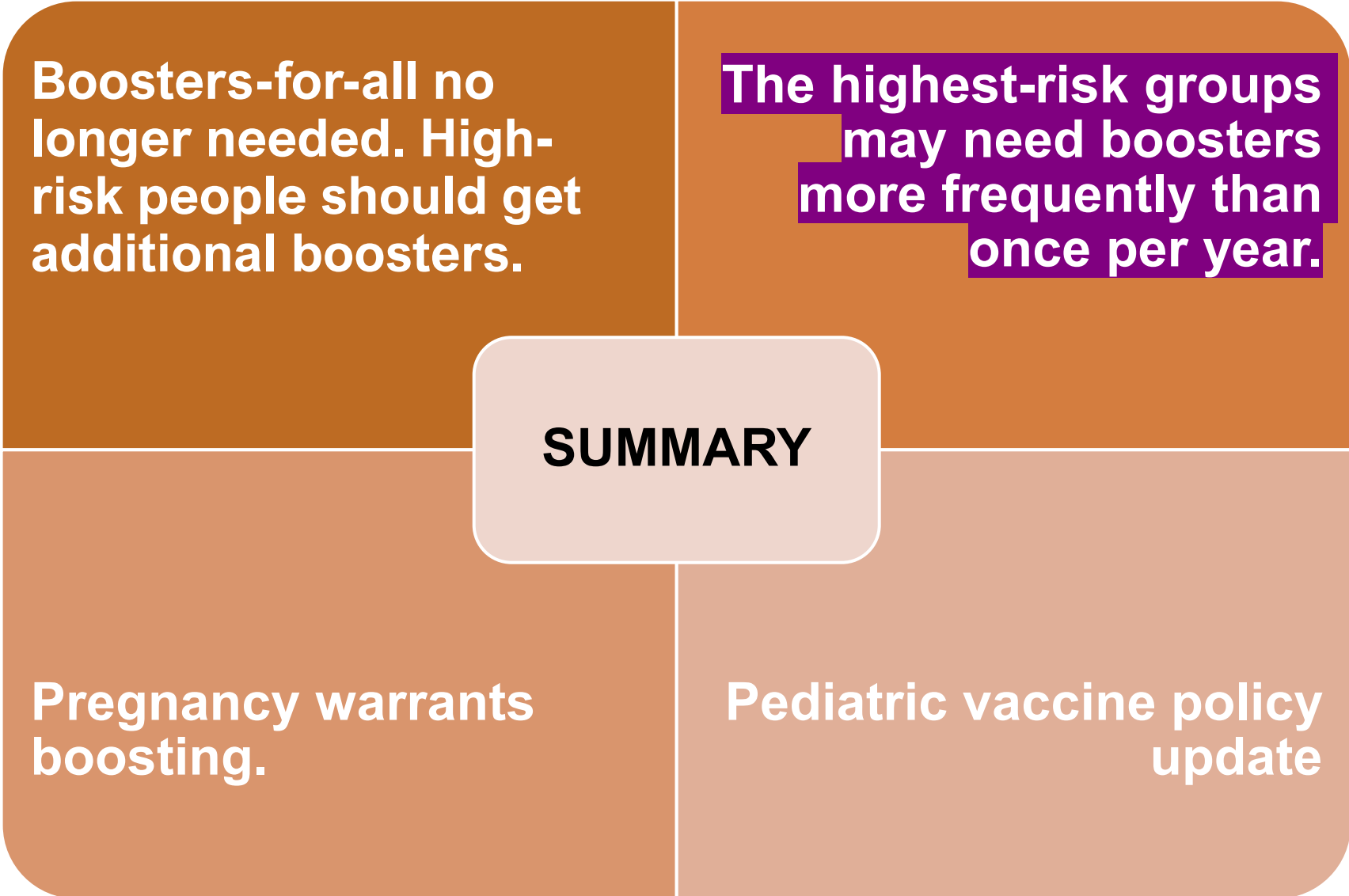
Figure 4. COVID-19 cases, deaths, hospitalizations, and ICU admissions reported weekly to WHO, as of 19 March 2023



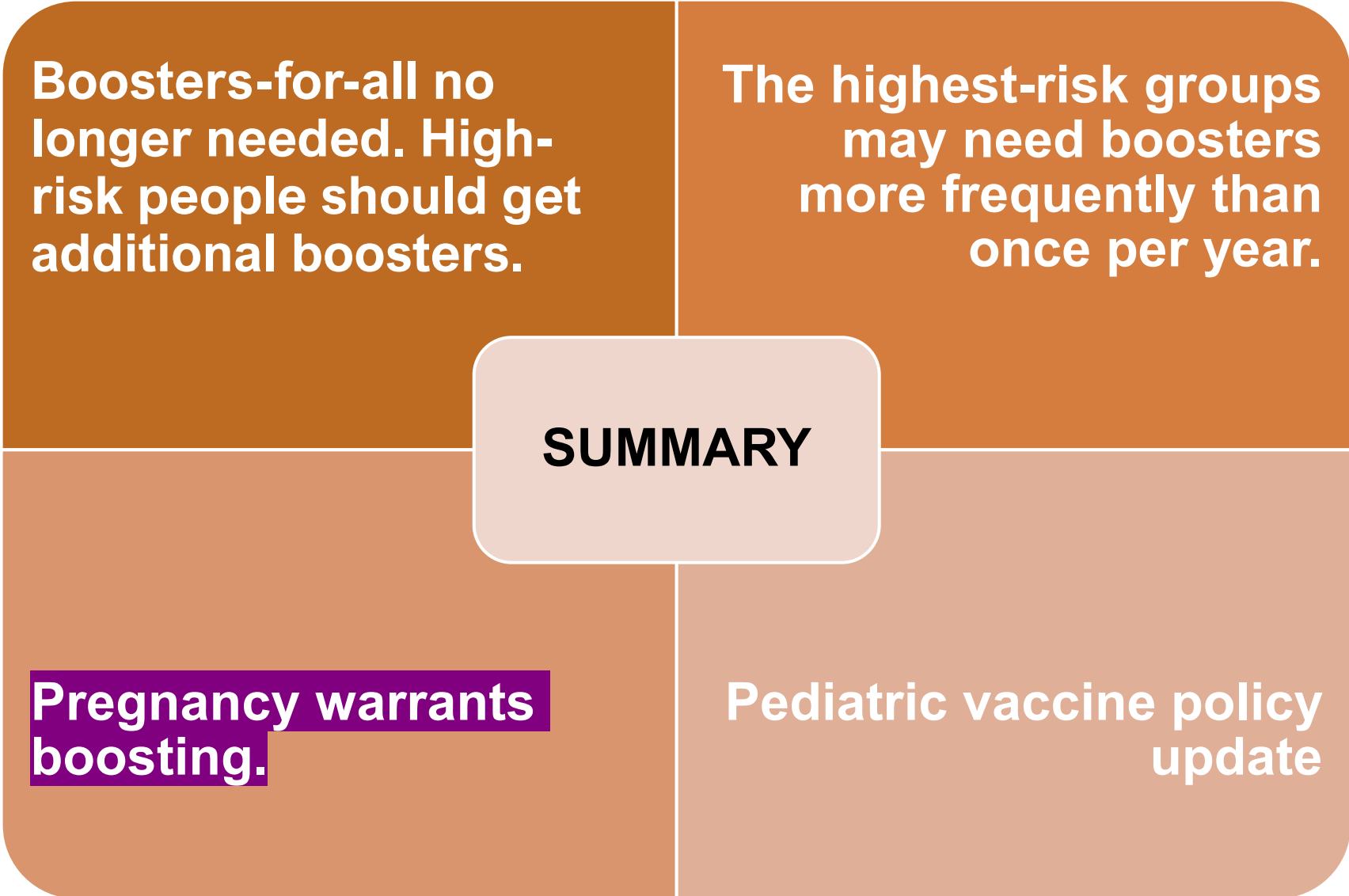
The World Health Organization (WHO) released a summary from a meeting of its expert panel entitled, **"Roadmap for COVID-19 vaccination in the Omicron era."**



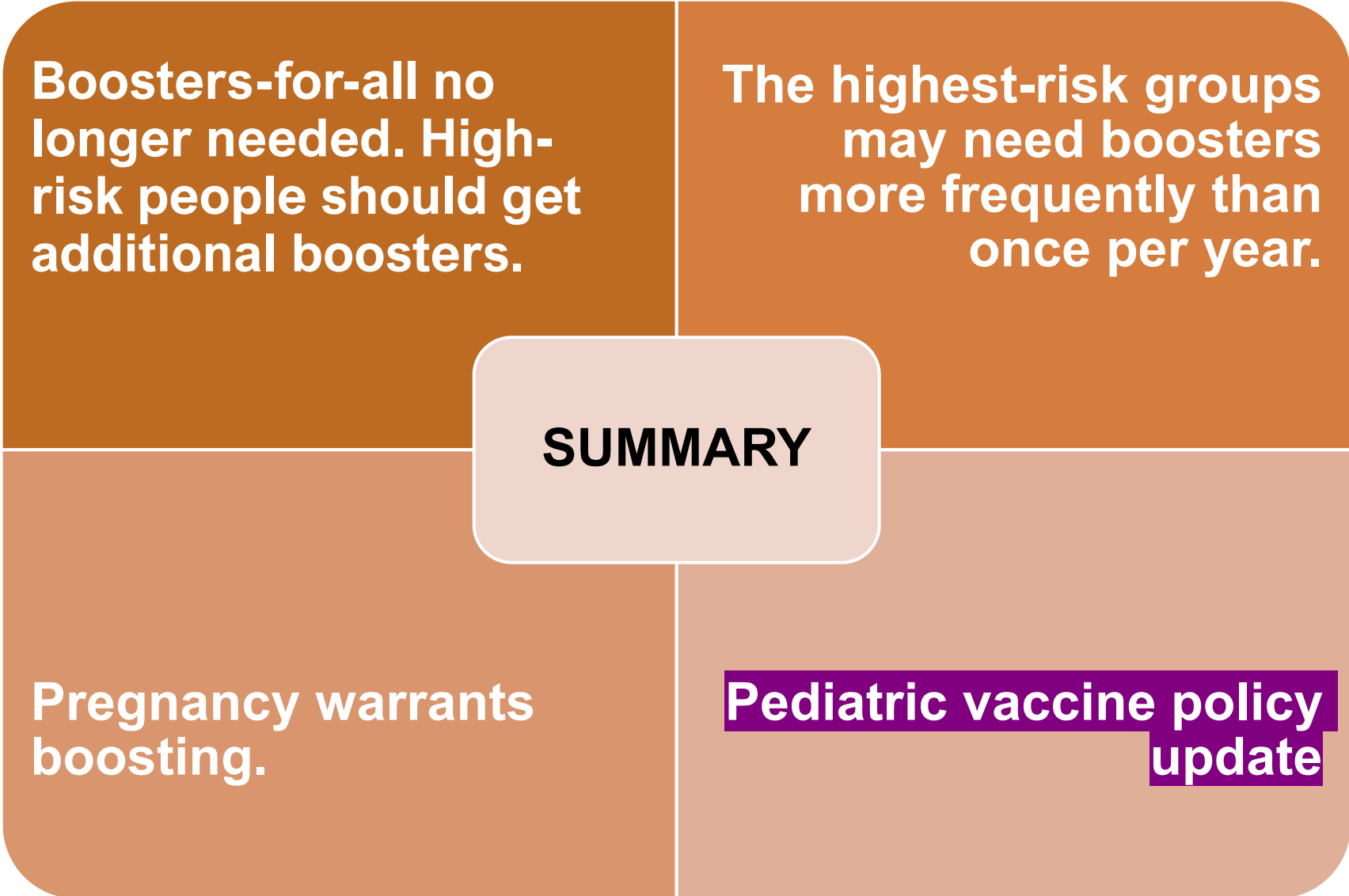
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SUMMARY

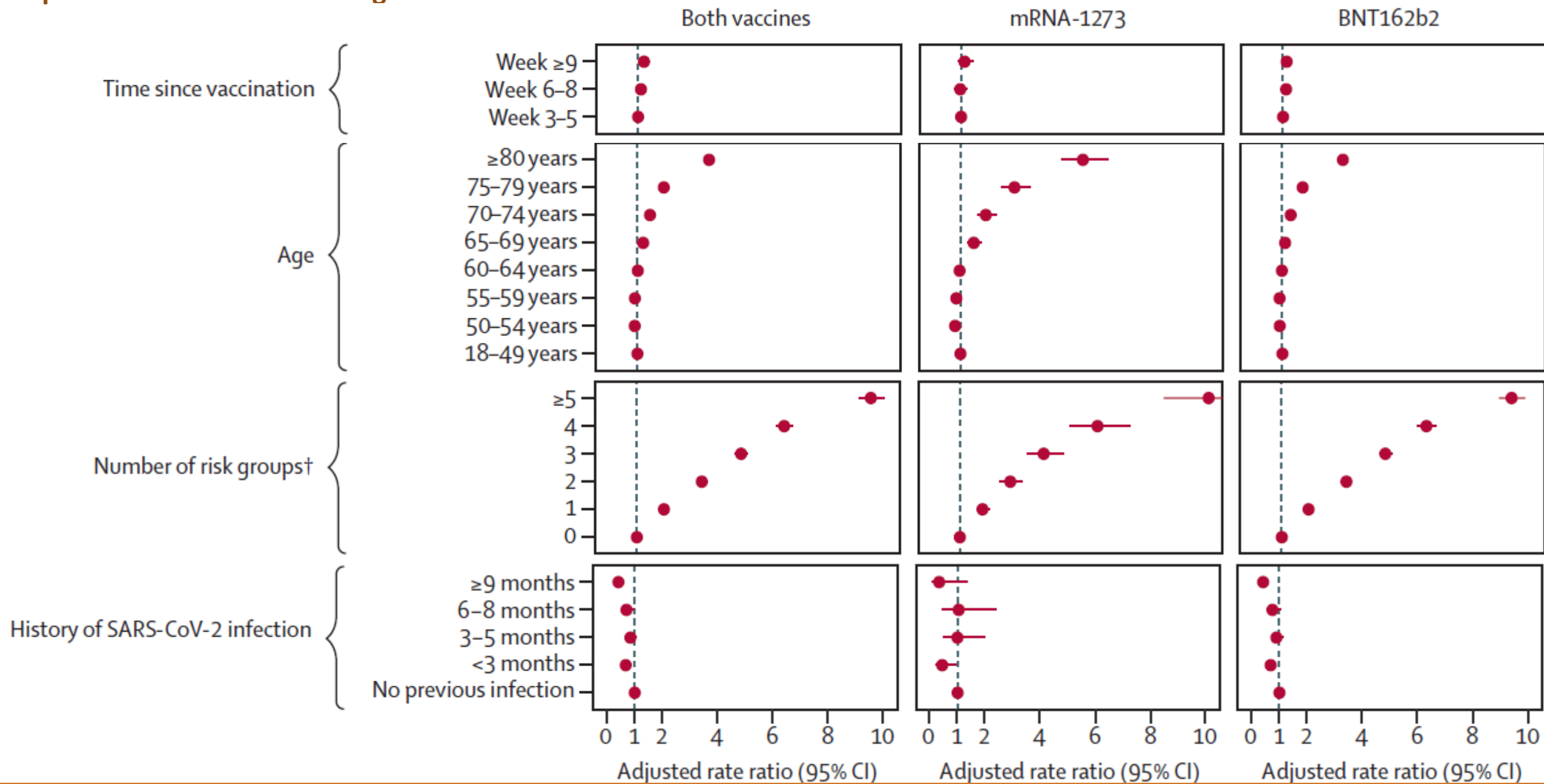
Original Investigation | Infectious Diseases

Prevalence and Characteristics Associated With Post-COVID-19 Condition Among Nonhospitalized Adolescents and Young Adults

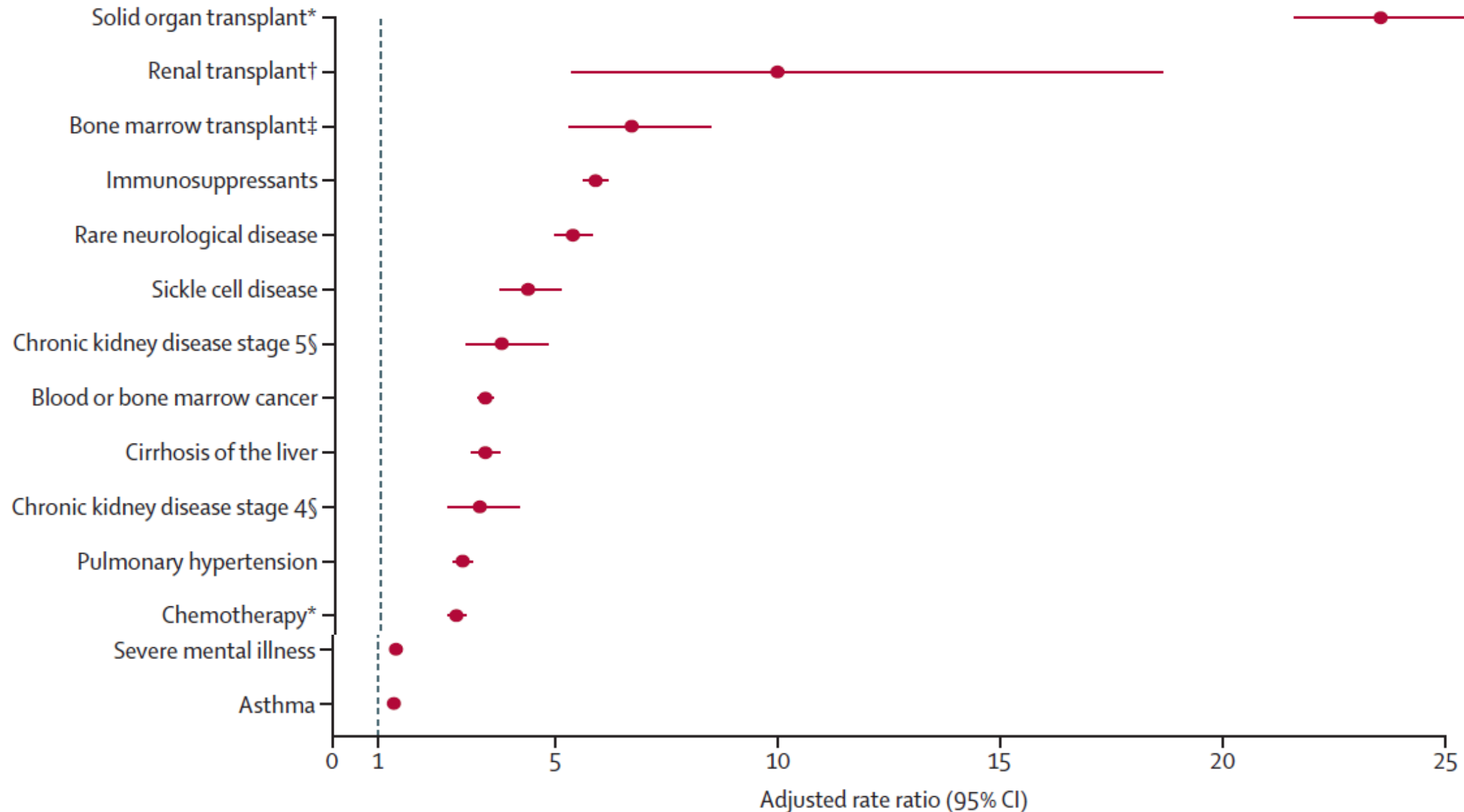
Joel Selvakumar, MD; Lise Beier Havdal, MD; Martin Drevvatne, MD; Elias Myrstad Brodwall, MD; Lise Lund Berven, PhD; Tonje Stiansen-Sonerud, MSc; Gunnar Einvik, MD, PhD; Truls Michael Leegaard, MD, PhD; Trygve Tjade, MD; Annika E. Michelsen, PhD; Tom Eirik Mollnes, MD, PhD; Fridtjof Lund-Johansen, MD, PhD; Trygve Holmøy, MD, PhD; Henrik Zetterberg, MD, PhD; Kaj Blennow, MD, PhD; Carolina X. Sandler, PhD; Erin Cvejic, PhD; Andrew R. Lloyd, MD, PhD; Vegard Bruun Bratholm Wyller, MD, PhD

The team evaluated the participants during the early convalescent stage and at 6-month follow-up. Study subjects underwent clinical exam, including pulmonary, cardiac, and blood tests to examine immunological and organ injury biomarkers. Researchers also conducted cognitive functional tests. They used the World Health Organization (WHO) definition for post COVID condition (PCC). Prevalence of PCC 6 months after acute COVID infection was about 50%, but was equally high at 47% in the control group. The team didn't find any biomarkers specific to viral infection at 6-month follow-up. **The main risk factor for PCC was symptom severity at baseline. Two psychosocial factors stood out as risk factors for PCC: low physical activity and loneliness.**

Pooled analyses of adjusted rate ratios for demographic and clinical characteristics associated with COVID-19-related hospitalisation or death among individuals who received booster doses



Pooled analyses of Poisson-adjusted rate ratios for specific clinical risk factors associated with COVID-19-related hospitalisation or death among individuals who received booster doses of mRNA-1273 or BNT162b2



Comparison between the Bivalent Booster and the Original Monovalent Booster in the Risk of Cardiovascular Events.*

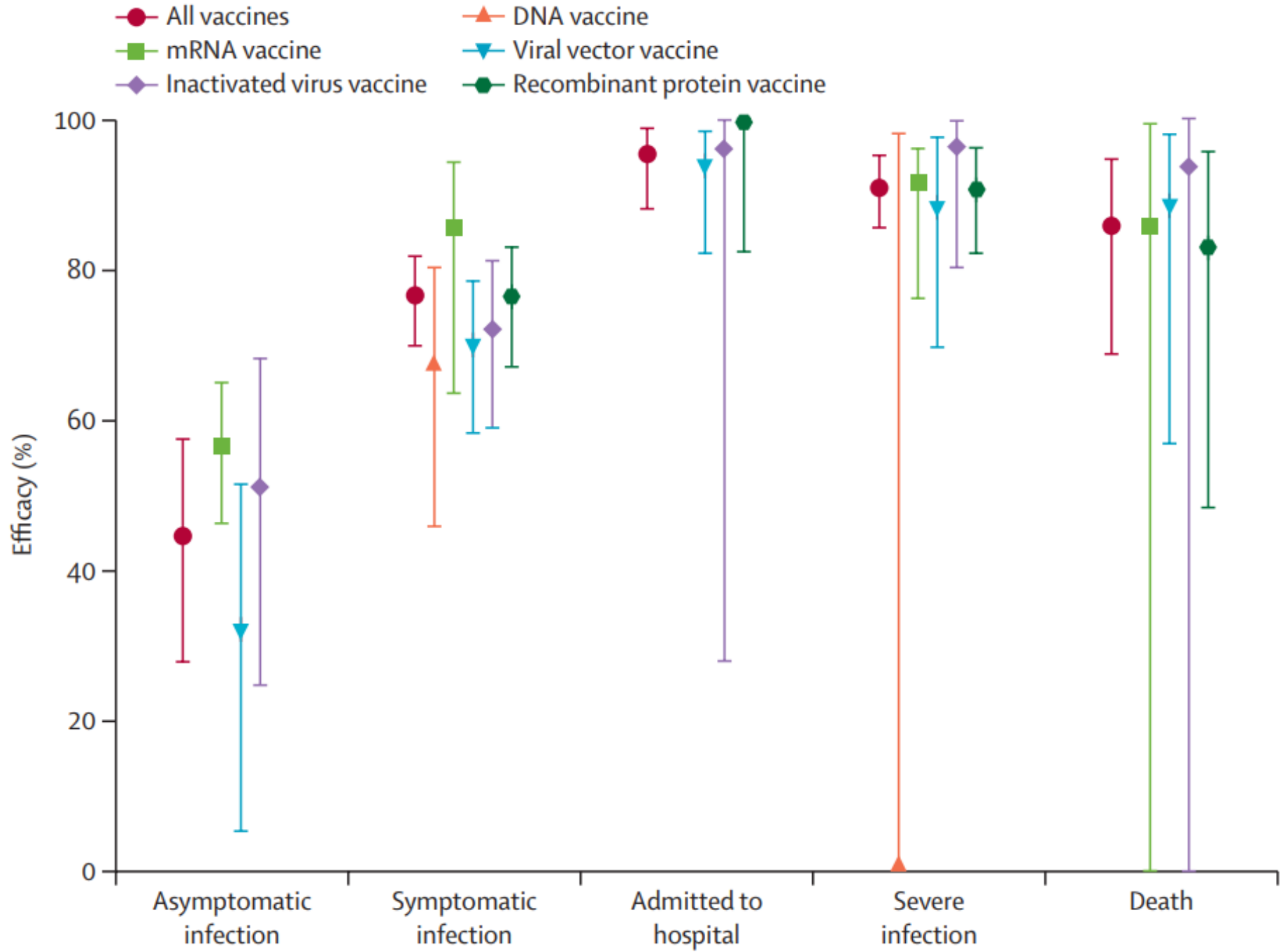
Table 1. Comparison between the Bivalent Booster and the Original Monovalent Booster in the Risk of Cardiovascular Events.*

Cardiovascular Event	Bivalent Vaccine (N=373,728)	Monovalent Vaccine (N=97,234)	Hazard Ratio (95% CI)†
	<i>no. of events (%)</i>		
Ischemic stroke	114 (0.030)	34 (0.035)	0.86 (0.58–1.27)
Hemorrhagic stroke	43 (0.011)	14 (0.014)	0.86 (0.46–1.61)
Myocardial infarction	117 (0.031)	34 (0.035)	0.92 (0.62–1.36)
Pulmonary embolism	62 (0.017)	22 (0.023)	0.83 (0.49–1.40)
All four events combined	335 (0.090)‡	104 (0.107)	0.87 (0.69–1.09)

* Listed are four categories of cardiovascular events that were recorded in the French National Health Data System and that occurred within 21 days after the receipt of either the Pfizer–BioNTech bivalent mRNA vaccine targeting both the ancestral and omicron BA.4–BA.5 sublineages of SARS-CoV-2 or the original monovalent vaccine. All the participants received their booster injection between October 6 and November 9, 2022.

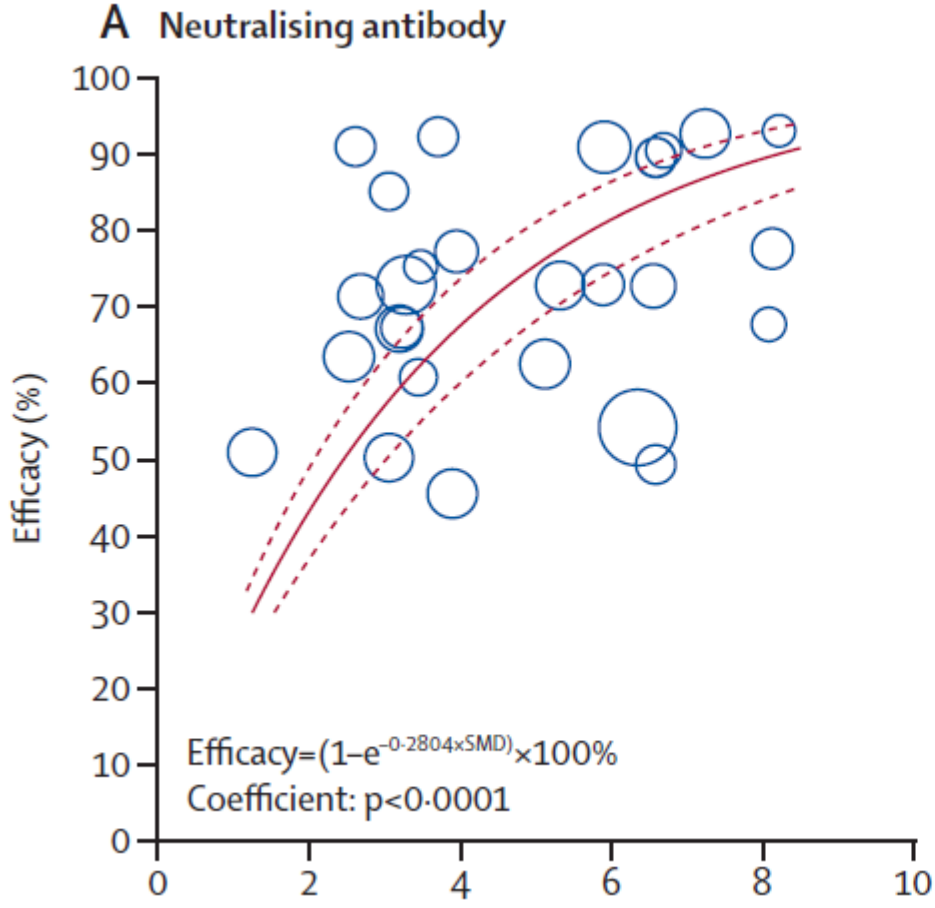
† Hazard ratios for the risk in the bivalent vaccine group were estimated with the use of propensity score–weighted Cox models. Details are provided in the Supplementary Appendix.

‡ One of the participants who received a bivalent vaccine had two cardiovascular events, so his data were censored after the first event for a total number of 335 events.

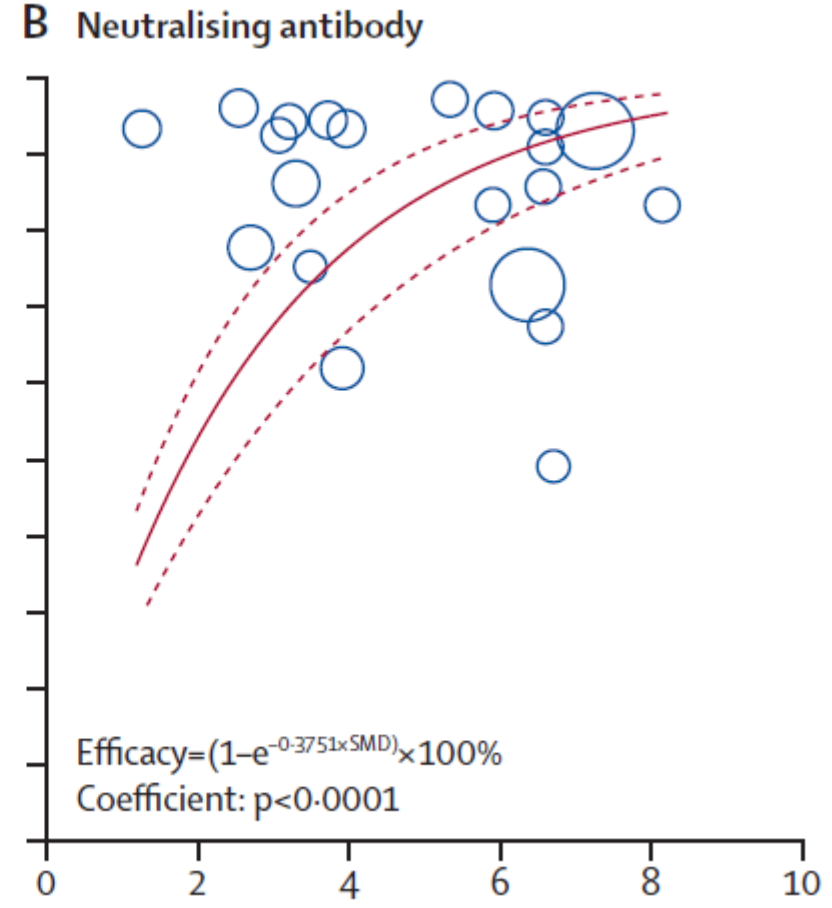


Differences in efficacy of different SARS-CoV-2 full vaccinations on preventing infections of different severity, according to vaccine type

COVID19-Vaccine-Induced Antibodies and Vaccine Efficacy



VE against symptomatic infection



VE against severe disease

Log-transformed antibody concentrations

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