

Global Health Cast 13

September 13th, 2022



Dr. Melvin Sanicas



Prof. Dr. Joe Schmitt

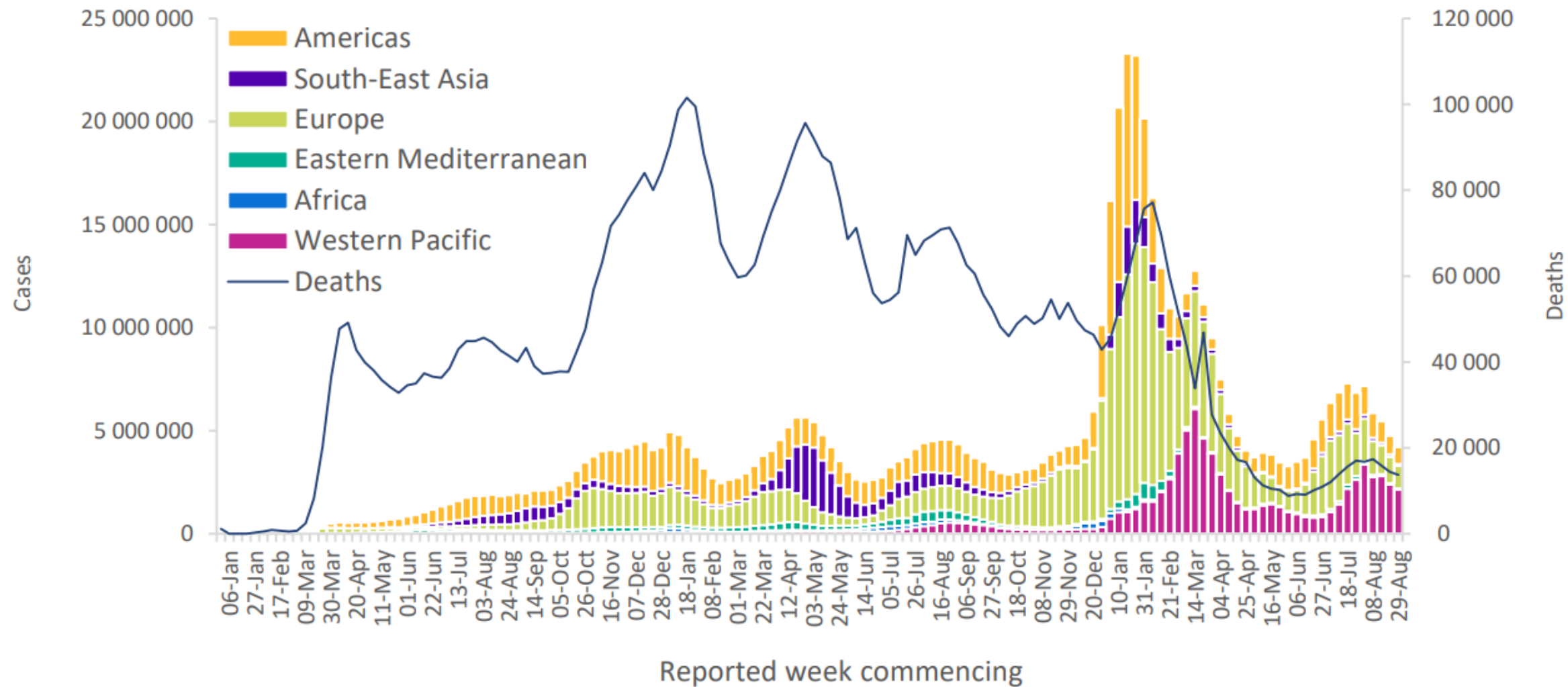
Every Tuesday

12.00 noon - CET

What we talk about today

- **COVID19 update**
- **Monkeypox update**
- **Long-term cardiac pathology after mild COVID19**
- **COVID19 vaccines licensed in Europe**
- **Leptospirosis – prevention**
- **COVID19 vaccines and infertility**
- **COVID19 orphans**
- **Infectious Diseases in India**
- **MPX proctitis**

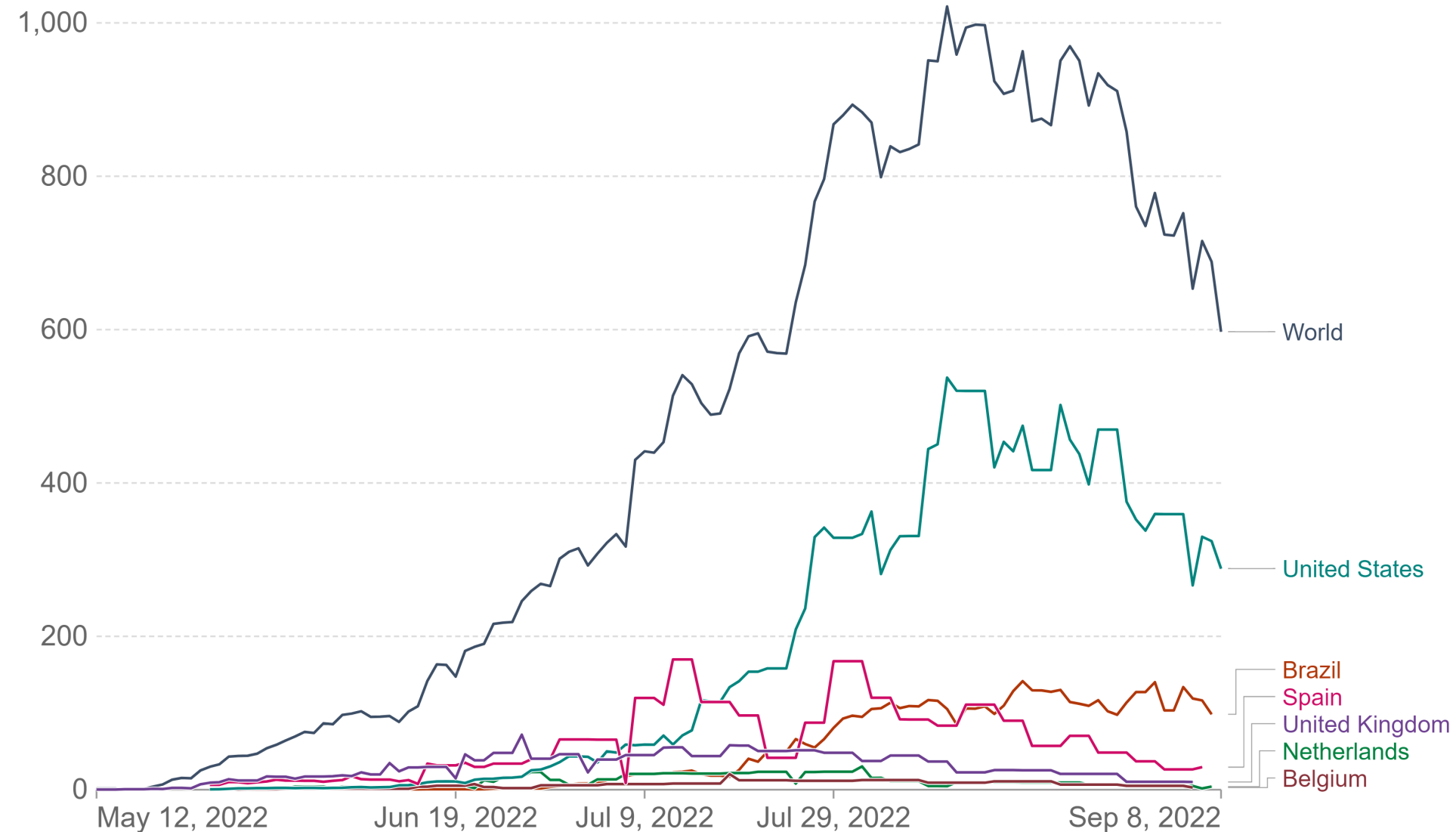
Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 4 September 2022**



Monkeypox: Daily confirmed cases

7-day rolling average

Our World
in Data



Source: Data produced by the 'Global.health' team — available at github.com/globaldothealth/monkeypox

CC BY



OPEN

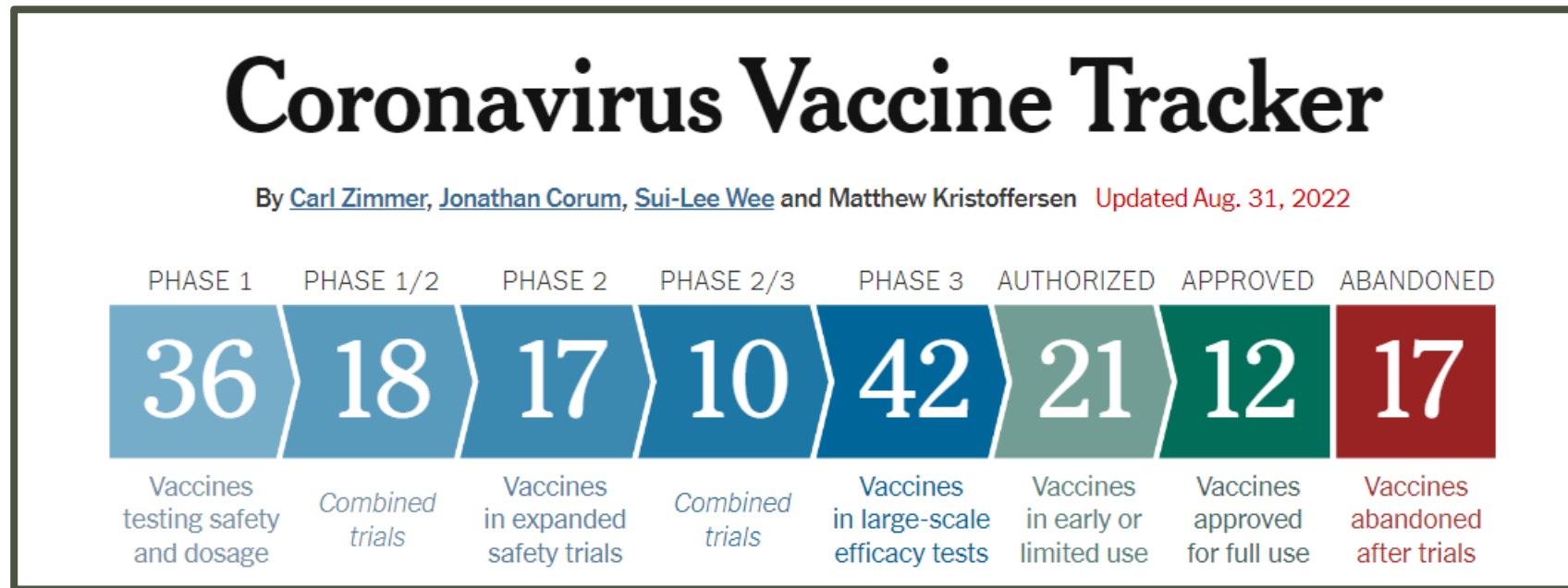
Long-term cardiac pathology in individuals with mild initial COVID-19 illness

Valentina O. Puntmann¹✉, Simon Martin^{1,2}, Anastasia Shchendrygina¹, Jędrzej Hoffmann^{1,3}, Mame Madjiguène Ka¹, Eleni Giokoglu¹, Byambasuren Vanchin¹, Niels Holm¹, Argyro Karyou¹, Gerald S. Laux¹, Christophe Arendt^{1,2}, Philipp De Leuw⁴, Kai Zacharowski⁵, Yascha Khodamoradi⁶, Maria J. G. T. Vehreschild⁶, Gernot Rohde⁷, Andreas M. Zeiher³, Thomas J. Vogl², Carsten Schwenke⁸ and Eike Nagel¹

Cardiac symptoms are increasingly recognized as late complications of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in previously well individuals with mild initial illness, but the underlying pathophysiology leading to long-term cardiac symptoms remains unclear. In this study, we conducted serial cardiac assessments in a selected population of individuals with Coronavirus Disease 2019 (COVID-19) with no previous cardiac disease or notable comorbidities by measuring blood biomarkers of heart injury or dysfunction and by performing magnetic resonance imaging. Baseline measurements from 346 individuals with COVID-19 (52% females) were obtained at a median of 109 days (interquartile range (IQR), 77–177 days) after infection, when 73% of participants reported cardiac symptoms, such as exertional dyspnea (62%), palpitations (28%), atypical chest pain (27%) and syncope (3%). Symptomatic individuals had higher heart rates and higher imaging values or contrast agent accumulation, denoting inflammatory cardiac involvement, compared to asymptomatic individuals. Structural heart disease or high levels of biomarkers of cardiac injury or dysfunction were rare in symptomatic individuals. At follow-up (329 days (IQR, 274–383 days) after infection), 57% of participants had persistent cardiac symptoms. Diffuse myocardial edema was more pronounced in participants who remained symptomatic at follow-up as compared to those who improved. Female gender and diffuse myocardial involvement on baseline imaging independently predicted the presence of cardiac symptoms at follow-up. Ongoing inflammatory cardiac involvement may, at least in part, explain the lingering cardiac symptoms in previously well individuals with mild initial COVID-19 illness.

SARS-CoV2-vaccines

The New York Times



This tracker is no longer being updated. It followed the development of Covid vaccines from early 2020 through August 2022. More than 120 clinical trials were underway at that time.

The New York Times

Globally leading COVID-19 vaccines

Leading vaccines

Developer	How It Works	Phase	Status
 Pfizer-BioNTech	mRNA	3	Approved in U.S., other countries. Emergency use in many countries.
 Sinopharm	Inactivated	3	Approved in China, Bahrain. Emergency use in many countries.
 Oxford-AstraZeneca	ChAdOx1	2 3	Approved in Brazil, India. Emergency use in many countries.
 Sinovac	Inactivated	3	Approved in China. Emergency use in many countries.
 Moderna	mRNA	3	Approved in U.S., Canada, Switzerland. Emergency use in many countries.
 Novavax	Protein	3	Approved in Canada, South Korea. Emergency use in several countries.
 Bharat Biotech	Inactivated	3	Approved in India. Emergency use in other countries.
 Johnson & Johnson	Ad26	3	Approved in Canada. Limited in U.S. Emergency use in many countries.
 Baylor-Biological E	Protein	3	Emergency use in India, Botswana.
 Gamaleya	Ad26, Ad5	3	Approved in Russia. Emergency use in many countries.

EMA authorized COVID19 vaccines (September 11,2022)

Vaccine	MAH	Type	Key milestones
Comirnaty	BioNTech Manufacturing GmbH	mRNA ≥5-12 years: 10 µg >12 years: 30µg	Conditional marketing authorisation issued: 21/12/2020 Annual renewal issued: 03/11/2021 Start of evaluation of application for adapted vaccine: 30/08/2022 (Original + Omicron BA.4/5) Authorisation for adapted vaccine issued: 01/09/2022 (Original + Omicron BA.1) (>12 years only)
Covid-19 Vaccine Valneva	Valneva Austria GmbH	Inactivated whole virus adjuvanted (18-50 years)	Marketing authorisation issued: 24/06/2022
Jcovden (Janssen)	Janssen-Cilag International NV	Ad Vector ≥ 18 years	Conditional marketing authorisation issued: 11/03/2021 Annual renewal issued: 03/01/2022
Nuvaxovid	Novavax CZ, a.s.	Spikeprotein (subunit) ≥12 years	Conditional marketing authorisation issued: 20/12/2021
Spikevax	Moderna Biotech Spain S.L.	mRNA ≥ 12 years: 100µg 6-11 years: 50µg (only monovalent)	Conditional marketing authorisation issued: 06/01/2021 Annual renewal issued: 04/10/2021 Authorisation for adapted vaccine issued: 01/09/2022 Spikevax bivalent (Original + Omicron BA.1)
Vaxzevria	AstraZeneca AB	Ad Vector ≥ 18 years	Conditional marketing authorisation issued: 29/01/2021 Annual renewal issued: 09/11/2021



Leptospirosis - Prevention



Avoid swimming or bathing in floodwater or any fresh water source that may contain animal urine

After floods or heavy rains, anyone who has been in contact with floodwater could be at risk for infection



Prevent rodent infestation

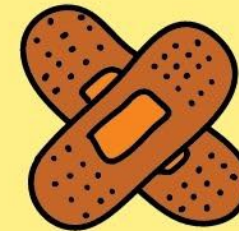


Avoid direct contact with potentially infected animals. Animal vaccination may provide some protection, but immunized animals can still excrete leptospires in urine



Do not walk barefoot and wear protective clothing when in contact with possible urine-contaminated wet soil

Protection of food and water from animal contamination



Cover and disinfect wounds with waterproof dressing



Consider chemoprophylaxis for individuals with high exposure risk in endemic environments:

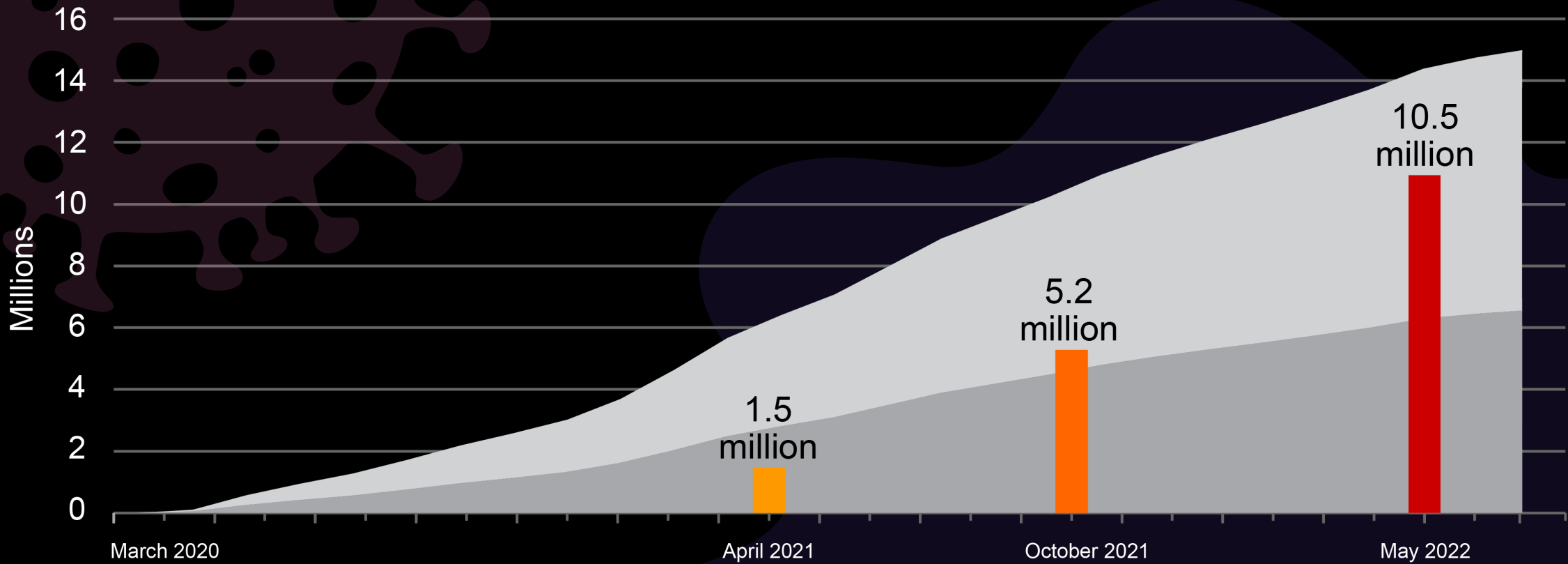
Doxycycline 200mg PO once per week

Episode 12: Who Framed the Rabbit | febrilepodcast.com | [@febrilepodcast](https://twitter.com/febrilepodcast) | [@Marcelaaos](https://twitter.com/Marcelaaos)

The impact of COVID-19 vaccines on fertility-A systematic review and meta-analysis (Zace et al, Vaccine pre-proof 12.09-2022)

- ▶ **29/1,406 screened studies included in a systematic review.**
- ▶ Conducted in Israel (24%), USA (20.7%), Russia (10.4%) China (3.5%), Italy (3.5%), North America Turkey (3.5%)
- ▶ Meta-analyses:
 - ▶ pre- and post-vaccination sperm progressive motility (44%, 95% CI 42%-62% vs 43%, 95% CI 31%-59% p=0.07)
 - ▶ Sperm concentration (50.6 mln/ml, 95% CI 35.1-72.8 vs 55.4 mln/ml, 95% CI 37.4-82.2 p=0.12).
 - ▶ Biochemical characteristics (0.51, 95% CI 0.40-0.65 vs 0.48, 95% CI 0.41-0.60 p=0.45)
 - ▶ Clinical characteristics (0.45, 95% CI 0.37-0.54 vs 0.47, 95% CI 0.40-0.55 p=0.31)
- ▶ **Pregnancy rate did not differ among vaccinated and not vaccinated groups.**
- ▶ **Subgroup by vaccine type: no significant difference, e.g.**
 - ▶ vaccinated with mRNA vaccines and non-vaccinated regarding biochemical pregnancy rates
 - ▶ pre- and post-vaccination with Gam-COVID-Vac regarding testosterone, FSH and LH levels;
 - ▶ pre- and post-vaccination with BNT162b2 vaccines regarding sperm volumes.

Global estimates of children affected by COVID-19-associated orphanhood and/or caregiver* loss



- Reported global COVID-19-related death toll
- Global COVID-19-related death toll including WHO-calculated excess mortality, as of May 2022

*grandparents or older kin living in the same household as the bereft child

For the Traveler: Selected Infectious Diseases in India

- ▶ Vaccine-Preventable Diseases
- ▶ HEPATITIS A
- ▶ TYPHOID
- ▶ JAPANESE ENCEPHALITIS
- ▶ RABIES
- ▶ CHOLERA
- ▶ Malaria
- ▶ MULTIDRUG-RESISTANT BACTERIA
- ▶ DENGUE, CHIKUNGUNYA, AND ZIKA
- ▶ TRAVELERS' DIARRHEA
- ▶ TUBERCULOSIS (TB)



Monkeypox presenting as proctitis in men who have sex with men

[Get access >](#)

Michal Yakubovsky ✉, David Shasha, Shelley Reich, Luba Tau, Nadav Friedel, Ora Halutz, Michal Dekel, Suzy Meijer, Ronen Ben-Ami, Yael Paran

Clinical Infectious Diseases, ciac737, <https://doi.org/10.1093/cid/ciac737>

Published: 06 September 2022 **Article history** ▼

“ Cite 🔑 Permissions ➦ Share ▼

Abstract

In our cohort of 70 MSM patients with monkeypox, more than one third presented with proctitis. In two-thirds of proctitis patients, there was no typical rash upon presentation, and in one-fifth, there was no rash at all, making the diagnosis a challenge. A rectal swab for monkeypox PCR can be diagnostic.

What we talk about today

- **COVID19 update**
- **Monkeypox update**
- **Long-term cardiac pathology after mild COVID19**
- **COVID19 vaccines licensed in Europe**
- **Leptospirosis – prevention**
- **COVID19 vaccines and infertility**
- **COVID19 orphans**
- **Infectious Diseases in India**
- **MPX proctitis**

THE EVOLUTION OF INTELLECTUAL FREEDOM

