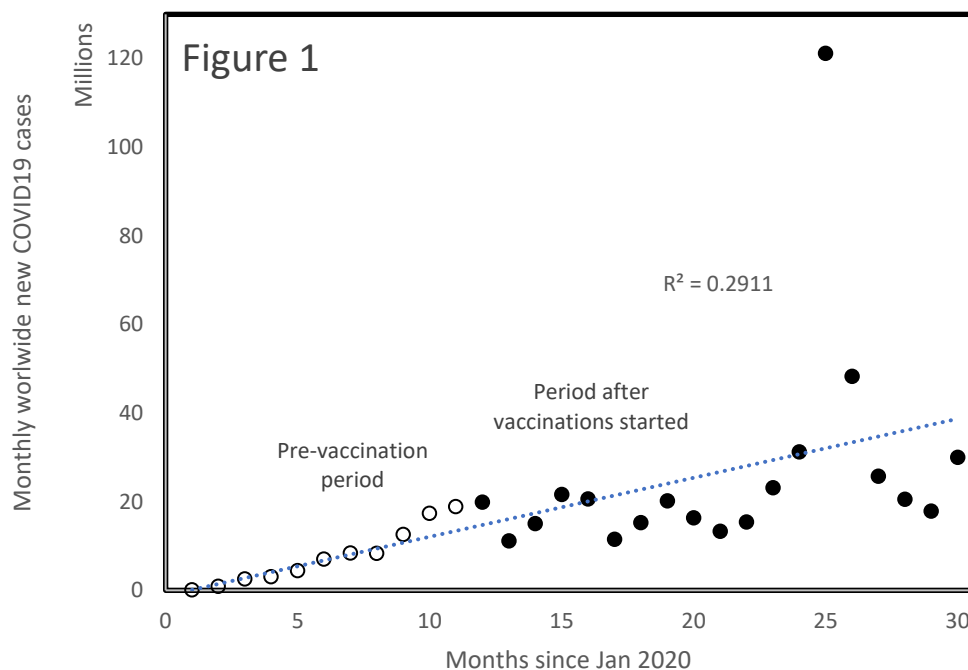


No vaccine-driven natural selection for more pathogenic mutants; omicron is not a Wuhan-derived strain, but a 2nd independent natural cross-species jump is nearly impossible

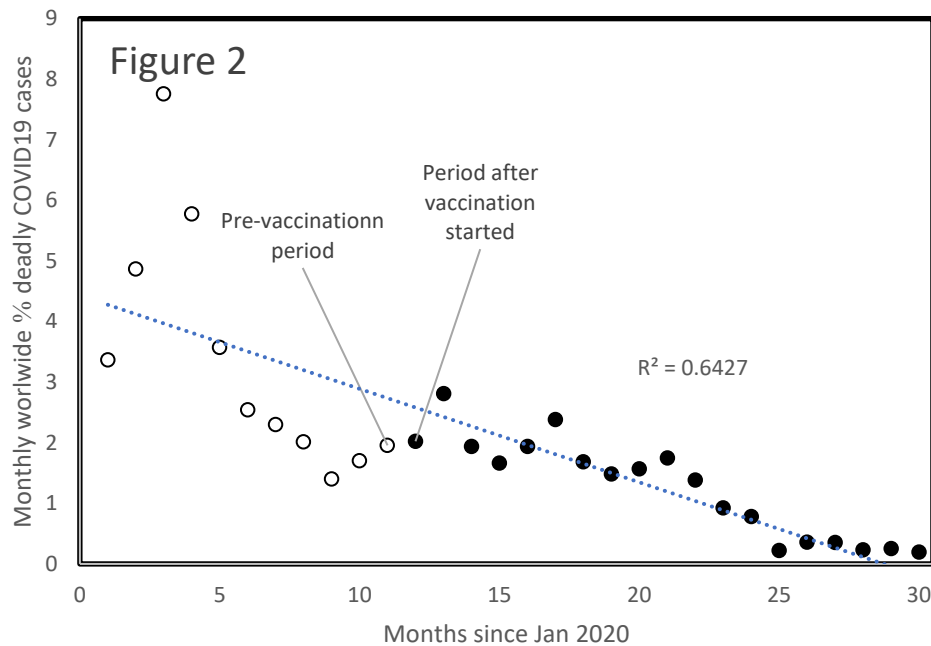
Hervé Seligmann, 1VIII2022

Vaccine injections for COVID19 immunization must be evaluated along at least two independent venues. The main one is the mere toxicity of the injections themselves. The latter point is so important that it has to be mentioned even if the focus of a discussion is the second one, the effects of vaccinations on the future microevolution of the virus in relation to its host.

There are two important points to make in relation to microevolution of omicron strains. Mass injections by leaky vaccines inevitably lead to selection for vaccine-escaping viral strains. Indeed, viral infectivity increased since the start of the pandemics (Figure 1, data from [COVID Live - Coronavirus Statistics - Worldometer \(worldometers.info\)](https://www.worldometers.info/coronavirus/), accessed 2VIII2022). Notably, monthly infection rates continue their increase after the start of vaccine injections.



However, claims that in a second step vaccine-escape viral strains would be selected for greater lethality does not meet most past nor current experiences. Typically, viral infectivity relates inversely with lethality. Complex scenarios where selection leads to greater viral lethality cannot be ruled out *a priori*, but are unlikely. In the current pandemics, viral lethality still decreases, in line with previous knowledge. There are no signs of selection for new dominant strains with greater lethality (Figure 2, data from [COVID Live - Coronavirus Statistics - Worldometer \(worldometers.info\)](https://www.worldometers.info/coronavirus/), accessed 2VIII2022). Notably, monthly COVID19 death rates do not decrease faster after the start of vaccine injections.



Omicron escaped vaccines since its emergence (about month 22 in Figures 1 and 2), rapidly infected hundreds of millions. This favours the emergence of dominant strains resulting from mutants favoured by natural selection (microevolution tends to be random in small populations, but follows natural selection in large populations). If a venue for natural selection favouring more lethal mutants existed, such mutant would have emerged rapidly, at most within the first 3-4 months of the omicron-dominated pandemics. Now, eight months since omicron emergence, this has not happened, and will not. If a more lethal omicron variant emerges and becomes dominant, this will not result from natural selection.

The very emergence of omicron as infecting the human population is in itself strong evidence for artificial interferences in the current pandemics. Omicron differs genetically so much from Wuhan-derived strains that it must have jumped the species barrier independently of the Wuhan strain. Such cross-species contaminations are extremely rare and co-occurrence of two jumps within 3 years are extremely unlikely.

Hence, discussions of viral microevolution in the context of the pandemics typically miss the 2 above crucial points: 1. indeed vaccine escape and greater infectivity evolved, but greater lethality did not and its natural occurrence is unlikely; and 2. natural emergence of omicron is extremely unlikely, much more even than natural emergence of the original human-infecting Wuhan strain.