

# Review of: "Forecasting by Analogy: A Parallel between the Trend of Confirmed COVID-19 Deaths in the Winters of 2022/2023 and 2023/2024 in Italy"

Giorgio Sonnino<sup>1</sup>

<sup>1</sup> ULB Université Libre de Bruxelles

Potential competing interests: No potential competing interests to declare.

## Brief Summary of the Work

Motivated by the fact that the trend of COVID-19 has recently started to increase again in Italy, the author postulated a parallel between the two winter periods of the years 2022-2023 and 2023-2024. As a consequence of this assumption, the author predicts that the number of deaths that could occur in Italy in the period from the end of October 2023 to the beginning of February 2024 could amount to almost 4,100-4,200.

## General Comments

- English should be double-checked; several typos were found.
- The statistical analysis of the data is missing.
- The main hypothesis mentioned above has not been justified either by a theoretical model or from an epidemiological point of view.
- The work is clearly written and deserves attention. However, there are some points which, in my opinion, should be clarified. The following suggestions are intended to fill some gaps.

## Suggestions

- 1) In Table 1, please provide the errors' magnitudes and variances related to the experimental data.
- 2) Clarify the difference between Assumption A and Assumption B from the epidemiological point of view. In particular, for both assumptions, explain the difference of *condition iii*) from the epidemiological point of view (see page 6 of the manuscript).
- 3) This work is based on the strategy of "*adopting the concept of analogy*". However, this assumption pops up in the manuscript without any justification from the epidemiological point of view. This is the vulnerable point of the work and could be a source of objections. To avoid this, I propose to follow one of the following two alternatives:
  - 3a) Through statistics. Calculate the p-values and show that the null hypothesis is verified below the  $p < 0.005$  threshold.

Also, provide the values of the correlation coefficients using the real data, now available, relating to the period October 2023-29 December 2023.

**3b)** Realistic justification. Provide, albeit heuristically, a justification from an epidemiological point of view.

## Conclusions

As mentioned, the work is interesting, and the author's idea deserves attention. However, written in this form, the manuscript may raise objections from the reader. I encourage the author to take into account the suggestions expressed above.