

Review of: "Association of Dementia and Patient Outcomes among COVID-19 Patients: A Multi-center Retrospective Case-Control Study"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

- Dementia is a multifaceted construct with a lot of nuances (neural targets of the neurodegenerative processes, prognosis etc.) according to the precise diagnosis (e.g., Alzheimer disease is different from Lewy Body Disease). Could the authors stratify the included patients according to the precise diagnosis of dementia? Could they also embed in their analyses the level of dementia?
- Exclusion Criteria: Another important exclusion criterion would have been past or present neurological/psychiatric conditions other than dementia or neurodevelopmental disorder.
- Unfortunately this is a retrospective study, and there is room for improvement regarding the selection of variables of interest. There are many other potentially relevant variables that might be worth looking at here. For instance, it would have been useful, if these data were available, to also include among the outcome measures, the psychological and cognitive assessment of the included patients. The authors mention that this was not possible in this retrospective study. However, there could be some useful information in the medical records concerning at least vigilance or similar psychological constructs that might be useful to additionally look at (e.g., for long covid).
- "It is also possible that these positive outcomes may be mediated by other unmeasurable factors". One of these factors (which is not fully mentioned in the manuscript) could be the fact that dementia patients might already receive more medical attention due to their dementia condition with respect to age-matched non-demented controls and which might counteract the effects of covid per se.

Minor slips:

- "the data was pulled". The Latin word "data" is plural
- "across the country": try to use a less US-centered language (>"across the US country")