

Modest versus significant excess mortality due to COVID-19 deaths in Europe

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We read with great interest the excellent article by Pizzato M et al.,¹ giving a fascinating narrative on the distribution of COVID-19 excess deaths during the first four years of the pandemic in 29 European countries. This excess mortality was highly variable but largely explained by country-level socioeconomic indicators, interventions, and vaccination.

However, we were surprised that Spain was not amongst the top countries with excess deaths, even in 2020 and 2021, contrary to our observations.^{2,3} We reckon this discrepancy may stem from different methods of calculating excess deaths, comparing a relative increase from the observed deaths from 2010 to 2019,¹ versus actual COVID-19 deaths defined as a death resulting from a clinically compatible illness, in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID-19 disease, e.g. trauma,³ as

endorsed by EUROSTAT. These two metrics, while related, measure different things. However, at the least in Spain it simply cannot be that the former is less than the later in 2020 and 2021, and likely in 2022 and 2023 (Table 1).^{1,3,4}

The language used in the paper, such as "... About half a million excess deaths occurred in each of the first three pandemic years, while only a modest excess was observed in 2023"; "... its impact was modest in 2023, indicating a trend towards pre-pandemic levels"; "... while a smaller excess was estimated for 2023 (108,629 deaths, +2.1%)" warrants careful consideration. Describing the 2023 excess mortality as "modest" could be misleading, as it risks downplaying the significance of the observed excess deaths. It is important to approach such characterizations with precision, ensuring that the terminology accurately reflects the data and its implications.



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Year	Excess deaths ¹		Actual deaths ³			Total
	n (95% C.I.)	% (95% C.I.)	n (%) ^a	n (%) ^b	n (%) ^c	
2020	61,437 (59,362; 63,511)	14.0 (13.5; 14.6)	60,358 (12.2%)	14,481 (2.9%)	0 (0.0%)	74,839 (15.1%)
2021	17,690 (15,352; 20,027)	4.1 (3.6; 4.7)	39,444 (8.8%)	595 (0.1%)	44 (0.0%)	40,083 (8.9)
2022	27,176 (24,518; 29,833)	6.3 (5.6; 6.9)	31,606 (6.8%)	66 (0.0%)	25 (0.0%)	31,697 (6.8%)
2023	-740 (-3718; 2238)	-0.2 (-0.8; 0.5)	7885 (1.8%)	7 (0.0%)	6 (0.0%)	7898 (1.8%)
Total	105,561 (95,531; 115,590)	6.1 (5.5; 6.7)	139,293 (7.6%)	15,149 (0.8%)	75 (0.0%)	154,517 (8.4%)

Note: Excess deaths extracted from Tables 1 and 2 of Pizzato M et al.¹ Spain actual deaths in 2020 and 2021 as per Soriano JB et al.,³ with ^aCovid-19 virus identified. ^bCovid-19 unidentified virus (suspected). ^cCovid-19 associated multisystemic inflammatory syndrome COVID-19; and in italics in 2022 and 2023 from the latest public repository of the national statistics institute (INE).⁴

Table 1: Excess deaths versus actual deaths due to COVID-19 in Spain from 2020 to 2023.

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Contributors

JBS had the original idea and wrote the first draft of this correspondence. AP performed the statistics. All authors contributed to the discussion, the writing, and approved the final submitted version.

Declaration of interests

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