



Excess mortality in patients with cancer during the COVID-19 pandemic in Peru: an analysis of death registry data

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Abstract

Background The COVID-19 pandemic has had a direct effect on patients with cancer, as reflected by the large number of COVID-19-related cancer deaths reported worldwide and the substantial decrease in cancer-related consultations during the pandemic. However, the impact of the COVID-19 pandemic on cancer mortality in Latin American countries has not been properly estimated. The aim of this study was to analyse the excess mortality related to cancer during the pandemic in Peru, including deaths directly or indirectly attributed to COVID-19.

Methods Excess mortality, which compares the number of deaths by any cause with the average number of expected deaths in typical circumstances during a specific timeframe, can be used as a simple but reliable indicator of the impact of the COVID-19 pandemic on cancer services. We carried out a descriptive study using data from the Peruvian death registration system, from which we filtered records that had registered neoplastic diseases (according to the tenth revision of WHO's International Statistical Classification of Diseases and Related Health Problems) as the cause of death between. Only data for the period of March 15 to June 30 in the years 2017–20 was included. We calculated excess mortality by subtracting the average number of deaths recorded for the indicated period between 2017 and 2019 from the same period of 2020 records (ie, the duration of lockdown measures in Peru) to obtain the percentage of excess mortality.

Findings The percentage of changes in the number of cancer-related deaths in Peru was +13·90% from 2017 to 2018, –1·27% from 2018 to 2019, and +16·94% from 2019 to 2020. We found an excess mortality of 928 cases (corresponding to an excess mortality of +17·27%) among patients with cancer, when comparing years 2017–19 with the year 2020. During the lockdown in 2020, 3135 (58·4%) of 5372 cancer deaths happened at home (vs 5900 [44·2%] of 13 338 for the years 2017–19). The highest excess mortality percentage was observed in patients with prostate cancer (+50·43%), breast cancer (+33·62%), and leukaemia (32·78%). Although these findings appear to be in line with reports from other countries, only 184 (3·4%) of 5372 deaths were registered with COVID-19 as an additional cause of death.

Interpretation Our results suggest that COVID-19 control measures (eg, lockdowns, physical distancing, and isolation of symptomatic patients), alongside the overwhelming strain on the health-care system, had a detrimental impact on cancer mortality in Peru. The pandemic has exposed flaws in the Peruvian health-care system, especially regarding cancer care. Although we recognise that the rate of COVID-19 testing in Peru is one of the lowest in Latin America, the excess of cancer deaths cannot be fully explained by COVID-19. These findings might be an indication that the alarming increase in cancer mortality in Peru could continue over the upcoming months if no action is taken. Our study also shows the importance of an adequate registry of deaths. We recommend that the national authorities should implement policies to limit the impact of the COVID-19 pandemic on patients with cancer, and that the continuous update and monitoring of deaths initiated during the COVID-19 pandemic is sustained. These measures can help to confirm the increasing trend in cancer deaths; serve as a rationale to develop strategies that can alleviate this burden (eg, by adopting models for delivering optimal cancer care while minimising transmission of COVID-19); and minimise the possibility of an increase in patients presenting with advanced-stage cancers.

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Declaration of interests
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