THE IMPACT OF THE COVID-19 PANDEMIC ON THE ACCESS TO RADIOTHERAPY FOR CANCER IN BRAZIL: A MODELING STUDY

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The impact of public health policy to reduce the spread of COVID-19 on access to cancer treatment is poorly defined. Previous research reported a significant increase in morbidity and mortality associated with cancer treatment delays and Brazil’s legislation states that treatment should be provided within a period of 2 months after diagnosis. We aim to estimate the total backlog in order to potential points to improvement in public health policy during pandemics. Monthly counts of radiotherapeutic procedures performed per region from January 2014 to December 2021 were obtained from Brazil's Unified Health System Informatics Department (DATASUS) through its Oncological Treatment Monitoring Panel (PAINEL-ONCOLOGIA), which collects information refers to the start time of the first cancer treatment from the diagnostic data information, according to Brazilian law (Law no. 12.732/2012). Forecasting models using historical first radiotherapy volume before March 2020 (first reported COVID-19 case in Brazil) aiming to incorporate the normal trend of access to radiotherapeutic treatment around the country) were constructed to predict expected monthly operations from March through December 2020. Monthly backlogs were calculated by comparing reported volume to forecasted volume. Between March 2020 and December 2021, 1994 of persons assigned for radiotherapy suffered from the delay caused to COVID-19 pandemic. North was the most the most affected region, were 12% of radiotherapy had some backlog. Although radiotherapy backlog was not so affected in Brazil as in other countries, the decurrent delay still may have had significant consequences to the ones who would require cancer treatment. However, cancer policy on radiotherapy access in Brazil may be an example on how to be prepared for dramatic scenarios in healthcare such as the COVID-19 pandemic.

Palavras-chave: Oncology, Time-series, COVID-19

Apoio: UCS, CNPq