

EPIDEMIOLOGICAL ALGORITHM AND EARLY MOLECULAR TESTING TO PREVENT COVID-19 OUTBREAKS IN A MEXICAN ONCOLOGIC CENTER.

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Introduction: Prevention strategies and detection of latent COVID-19 infections in oncology staff and oncologic patients are essential to prevent outbreaks in a cancer center. In this study, we used two statistical predictive models in oncology staff and patients from the radiotherapy area to prevent outbreaks and detect COVID-19 cases.

Methods: Staff and patients answered a questionnaire (electronic and paper surveys, respectively) with clinical and epidemiological information. The data was collected through two online survey tools: Real-Time Tracking (R-Track) and Summary of Factors (S-Facts). According to the algorithm's models, cut-off values were established. SARS-CoV-2 qRT-PCR tests confirmed the algorithm's positive individuals.

Results: Oncology staff members (n=142) were tested, and 14% (n=20) were positives for the R-Track algorithm; 75% (n=15) were qRT-PCR positive. The S-Facts algorithm identified 7.75% (n=11) positive oncology staff members, and 81.82% (n=9) were qRT-PCR positive. Oncology patients (n=369) were evaluated, and 1.36% (n=5) were positive for the algorithms. The 5 patients (100%) were confirmed by qRT-PCR at a very early stage.

Conclusions; The proposed algorithms could prove to become an essential prevention tool in countries where qRT-PCR tests and vaccines are insufficient for the population.

Keywords: COVID-19, epidemiology, molecular testing, oncology