

BIO_14 - Analysis of vaccine efficacy against COVID-19 in oncology patients under active treatment

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Introduction: After the results of phase III vaccine studies became available, the leading oncology societies recommended two doses of COVID-19 vaccination to all patients with cancer with no specific recommendation for tumor type and active treatments. However, the data on the COVID-19 vaccine efficacy in cancer patients is limited due to exclusion of cancer patients from most vaccine clinical trials.

Objective: For this reason, the study proposes to evaluate the vaccine effectiveness against COVID19 in the immunosuppressed population, especially the oncology group under active treatment, to analyze the lasting protective response.

Methodology: For this prospective study, we recruited 117 patients in active oncology treatment and healthy controls (healthcare professionals) from the Hospital da Baleia in Belo Horizonte since November 2021. At the time of signing the Informed Consent Form (ICF), 5 mL of whole blood was collected and submitted to serological analysis by ELISA. Follow-up is still ongoing for new collections, especially after booster doses.

Results: Our data revealed that the vaccine effectiveness rate in immunocompromised patients, especially oncologic patients under treatment, is lower than in immunocompetent volunteers, especially when vaccinated with CoronaVac. Moreover, after the administration of the mRNA BNT162b2 booster dose, the reactivity rate is significantly increased, especially in patients vaccinated with the Sinovac vaccine.

Conclusion: Although cancer patients have lower immunogenicity rates, it can be inferred that the vaccines made available for emergency use ensure the immunological safety of the vast majority of vaccines.

Keywords: Covid-19 vaccination; Vaccine effectiveness; Immunocompromised patients