



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Letter to the Editor

Letter to Editor, Re: The first report on Covid-19 vaccine refusal by cancer patients in Italy: Early data from a single-institute survey

Educational Webinar about COVID-19 Vaccines in Oncological Patients: A Promising Strategy to Tackle COVID-19 Vaccine Hesitancy



Cynthia Villarreal-Garza ^{a,*}, Bryan F. Vaca-Cartagena ^a,
Andrea Becerril-Gaitan ^a, Fernando Castilleja-Leal ^b

^a Breast Cancer Center, Hospital Zambrano Hellion TecSalud, Tecnológico de Monterrey, San Pedro Garza García, Nuevo Leon, Mexico

^b Tecnológico de Monterrey, School of Medicine and Health Sciences, Monterrey, Nuevo Leon, Mexico

Received 18 August 2021; accepted 18 August 2021

Available online 29 September 2021

Dear Editor

In a recently published article in the *European Journal of Cancer*, Di Noia *et al.* [1] documented a vaccine refusal rate towards COVID-19 immunisation of 11% in patients with solid tumours after being informed by their treating physicians of the benefits and potential risks of receiving a COVID-19 vaccine. Several studies worldwide have documented varying rates of vaccine hesitancy among oncological patients that can be as high as 59% [2–8]. The increased risk of infection and COVID-19 associated morbidity and mortality in cancer patients, as well as the emergence of new SARS-CoV-2 variants that keep

imposing a tremendous strain on health care services worldwide, makes the high hesitancy rate towards COVID-19 immunisation a matter of great concern.

Di Noia *et al.* [1] found that the most common reasons associated with vaccine refusal were fear of vaccine-related adverse events (48%), negative interaction with concomitant antitumour therapy (27%), and fear of allergic reactions (11%). These concerns, as well as the lack of information regarding the safety and effectiveness of COVID-19 vaccines, are among the most commonly associated factors with vaccine hesitancy in the oncological population [1,3–8]. Fortunately, the majority of studies assessing COVID-19 vaccine hesitancy among these patients have found that the most common reasons that could motivate hesitant patients to get vaccinated were being recommended by their oncologists/treating physicians and having more information regarding COVID-19 vaccines' effectiveness and safety [3–6,8]. In accordance with these findings, our research group aimed to evaluate if an educational webinar could influence the knowledge and attitudes towards COVID-19 vaccination in cancer

DOI of original article: <https://doi.org/10.1016/j.ejca.2021.05.006>.

* Corresponding author: Breast Cancer Center, Hospital Zambrano Hellion, TecSalud, Tecnológico de Monterrey, Batallón de San Patricio #112, San Pedro Garza García, Nuevo Leon, Mexico.

E-mail address: cynthia.villarreal@tecsalud.mx (C. Villarreal-Garza).

[@Dra_CVillarreal](https://twitter.com/Dra_CVillarreal) (C. Villarreal-Garza)

<https://doi.org/10.1016/j.ejca.2021.08.051>

0959-8049/© 2021 Published by Elsevier Ltd.

patients. An educational webinar was broadcasted on 28th June 2021, through the social media channels of TecSalud Hospitals in Monterrey, Mexico, where a panel of experts involving a medical oncologist, infectious disease specialist, and an intensivist discussed the use of COVID-19 vaccines in oncological patients. For measuring this webinar's impact, viewers were asked to complete a survey at two time points, at the beginning and the end of the webinar, that inquired participants' perspectives regarding COVID-19 vaccines' safety and effectiveness, as well as its recommendation in oncological patients.

Overall the webinar had a total of 85,005 views, with 50 participants answering the first survey, 37 the second, and only 11 completing both. At the beginning of the webinar 17 (34%), 18 (36%) and 23 (46%) thought that more information was needed or were not sure if COVID-19 vaccines were recommended, safe, and effective in oncological patients, respectively. In the second survey, these numbers decreased to 1 (3%), 3 (8%), and 7 (19%), respectively. Responses of participants who completed both surveys ($n = 11$) were explored using McNemar's test. After watching the webinar, a significant increase in the number of those acknowledging that COVID-19 vaccines were safe (45% versus 100%, $p = 0.031$), effective (36% versus 91%, $p = 0.031$), and recommended (45% versus 100%, $p = 0.031$) for oncological patients was documented. Moreover, cancer patients ($n = 8$, 100%) who have not received a COVID-19 vaccine stated that this webinar convinced them to get vaccinated.

These results show that educational interventions could be a promising and feasible strategy for tackling COVID-19 vaccine hesitancy among the oncological population, and increasing COVID-19 vaccine literacy among the general population. Similarly, Kelkar *et al.* [9] documented the positive impact that an educational webinar could have on the attitudes towards COVID-19 immunisation among cancer patients and their caregivers. They found that before the intervention, 71% of participants were willing to receive a COVID-19 vaccine, while after the webinar, this percentage increased to 83% [9].

Recently, the Centers for Control and Disease Prevention [10], have authorised the administration of a homologous mRNA COVID-19 booster dose after completing the full vaccination regimen for solid organ transplant recipients and those with an equivalent level of immunosuppression (i.e., patients under active treatment for solid and haematological malignancies, recipients of CAR-T-cell or hematopoietic stem cell transplant, patients under active treatment with high-dose corticosteroids, alkylating agents, antimetabolites and/or severe immunosuppressive agents). For this plan to become effective, the implementation of strategies that promote vaccine acceptance, like educational webinars, as well as the active participation of

oncologists and the medical community for increasing vaccine literacy and addressing information gaps, are of utmost importance and should be encouraged.

Funding

None.

Conflict of interest statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- [1] Di Noia V, Renna D, Barberi V, Di Civita M, Riva F, Costantini G, et al. The first report on coronavirus disease 2019 (COVID-19) vaccine refusal by patients with solid cancer in Italy: early data from a single-institute survey. *Eur J Cancer* 2021 Aug; 153:260–4. <https://doi.org/10.1016/j.ejca.2021.05.006>.
- [2] Stoeklé HC, Sekkate S, Angellier E, Hervé C, Beuzebec P. Refusal of anti-coronavirus disease 2019 vaccination in cancer patients: is there a difference between the sexes? *Eur J Cancer* 2021 Jul 21;155:54–5. <https://doi.org/10.1016/j.ejca.2021.06.048>.
- [3] Barrière J, Gal J, Hoch B, Cassuto O, Leysalle A, Chamorey E, et al. Acceptance of SARS-CoV-2 vaccination among French patients with cancer: a cross-sectional survey. *Ann Oncol* 2021 May;32(5):673–4. <https://doi.org/10.1016/j.annonc.2021.01.066>.
- [4] Villarreal-Garza C, Vaca-Cartagena BF, Becerril-Gaitan A, Ferrigno AS, Mesa-Chavez F, Platas A, et al. Attitudes and factors associated with COVID-19 vaccine hesitancy among patients with breast cancer. *JAMA Oncol* 2021;7(8):1242–4. <https://doi.org/10.1001/jamaoncol.2021.1962>.
- [5] Chun JY, Kim SI, Park EY, Park SY, Koh SJ, Cha Y, et al. Cancer patients' willingness to take COVID-19 vaccination: a nationwide multicenter survey in Korea. *Cancers (Basel)* 2021 Aug 1;13(15):3883. <https://doi.org/10.3390/cancers13153883>.
- [6] Brodziak A, Sigorski D, Osmola M, Wilk M, Gawlik-Urban A, Kiszka J, et al. Attitudes of patients with cancer towards vaccinations-results of online survey with special focus on the vaccination against COVID-19. *Vaccines (Basel)* 2021 Apr 21; 9(5):411. <https://doi.org/10.3390/vaccines9050411>.
- [7] Kufel-Grabowska J, Bartoszkiewicz M, Ramlau R, Litwiniuk M. Cancer patients and internal medicine patients attitude towards COVID-19 vaccination in Poland. *Adv Clin Exp Med* 2021 Jul 20. <https://doi.org/10.17219/acem/138962>. Epub ahead of print.
- [8] Noronha V, Abraham G, Bondili SK, Rajpurohit A, Menon RP, Gattani S, et al. COVID-19 vaccine uptake and vaccine hesitancy in Indian patients with cancer: a questionnaire-based survey. *Cancer Res Stat Treat* 2021;4:211–8.
- [9] Kelkar AH, Blake JA, Cherabuddi K, Cornett H, McKee BL, Cogle CR. Vaccine enthusiasm and hesitancy in cancer patients and the impact of a webinar. *Healthcare (Basel)* 2021 Mar 19;9(3): 351. <https://doi.org/10.3390/healthcare9030351>.
- [10] CDC. Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Authorized in the United States. Accessed August 17, 2021. <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html>.