



# Letter to the Editor: The possible role of lymphadenopathy after vaccination in posttraumatic stress disorder in cancer survivors during COVID-19

Cian-Cian Lin<sup>1</sup>

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Dear editor,

I read the article “Experiences of breast cancer survivors during the COVID-19 pandemic: a qualitative study” published in your journal in volume 29, issue 11 with interest [1]. The study indicated both physical and psychosocial challenges faced by breast cancer survivors in the outbreak. Among the psychological impacts, posttraumatic stress disorder (PTSD) is composed of core symptoms including intrusion, avoidance, negative cognitive or mood alternations, hyperarousal or reactivity alternations after traumatic experiences exposure. PTSD had been commonly seen in cancer survivors with lifetime prevalence about 12.6% [2]. Many cancer patients see the experiences of being diagnosed with cancer or receiving treatment as a traumatic event [2]. Even long-term disease-free patients had high prevalence of PTSD [3]. It might be suggested that fear of recurrence and poor previous experience of being informed of the diagnosis were all the possible factors.

Prior studies had shown higher risk of PTSD symptoms in cancer patients during the COVID-19 pandemic under the stress of fear of infection, whether canceling the hospital appointment or adapted monitoring [1, 4]. Additionally, as the COVID-19 vaccines gradually released to the public in the first year of the pandemic, the vaccination coverage (at least one shot) had been administered to approximately 60% of the eligible population worldwide. [5] Cases of lymph nodes enlargement after vaccination for weeks to months, especially axillary and supraclavicular lymphadenopathy had been noticed [6, 7]. Most of the cases of lymphadenopathy were discovered by regular follow-up imaging studies [8]. Findings from mammography, sonography over neck or breast, computed tomography, or magnetic resonance

imaging were all possible. There was a broad consensus that the COVID-19 vaccination should not be postponed even considering the worry of cancer survivor follow-up imaging [6]. However, recommendations varied by countries. The Society of Breast Imaging in the USA had altered the suggestions either receiving imaging before the first dose or 6 to 10 weeks after vaccination, whereas no specific recommendations had been proposed in Europe or UK [6]. Managements in response to the lymphadenopathy and suspicious malignancy including shortening interval of imaging follow-up or even confirming diagnosis by biopsy, depending on the pathological pattern might still have chance to be arranged.

Though previous studies did not display specific cancer types as predictors of PTSD and even lower 6-month PTSD incidence in breast cancer patients was seen in one study, much more frequent hospital visits and examinations might cause or aggravate pre-existing PTSD symptoms [8]. Since every time of physical examinations resembled the patients’ previous trauma of cancer screening or diagnostic process. The similar cancer-related experiences might trigger re-experiencing symptoms of PTSD [9]. Follow-up studies about both the biological and psychosocial influences of COVID-19 vaccines in the future are expected. Also, since they would have to live normally with the COVID-19 virus in the rapidly changing pandemic, establishing a more comprehensive, individualized care model and developing self-regulation skills for PTSD prevention or reducing post-traumatic stress symptoms severity could be important for enhancing the quality of life of cancer survivors.

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## Declarations

**Competing interests** The author declares no competing interests.

✉ Cian-Cian Lin  
chieko221hayashi@yahoo.com.tw

<sup>1</sup> Department of Psychiatry, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan

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