

Lung cancer patients receiving immune checkpoint inhibitors: safety and immunogenicity of mRNA-covid-19 vaccination

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Editorial

Currently, in cancer or lung-cancer patients, ICIs (immune checkpoint inhibitors), such as anti-CTLA-4, anti-PD-1 (anti-programmed cell death protein 1), anti-PD-L1 (anti-programmed death-ligand 1 antibodies), etc. are widely prescribed as an agent or in other combined treatment modalities.¹ Due to immune-associated adverse events (iaAEs), these ICIs can facilitate antitumor effects, such as interstitial pneumonitis, endocrine-gland-disorders-associated abnormal hormone secretion² that can be caused and aggravated by mRNA-based-COVID-19 vaccines (Figure 1).^{1,3}

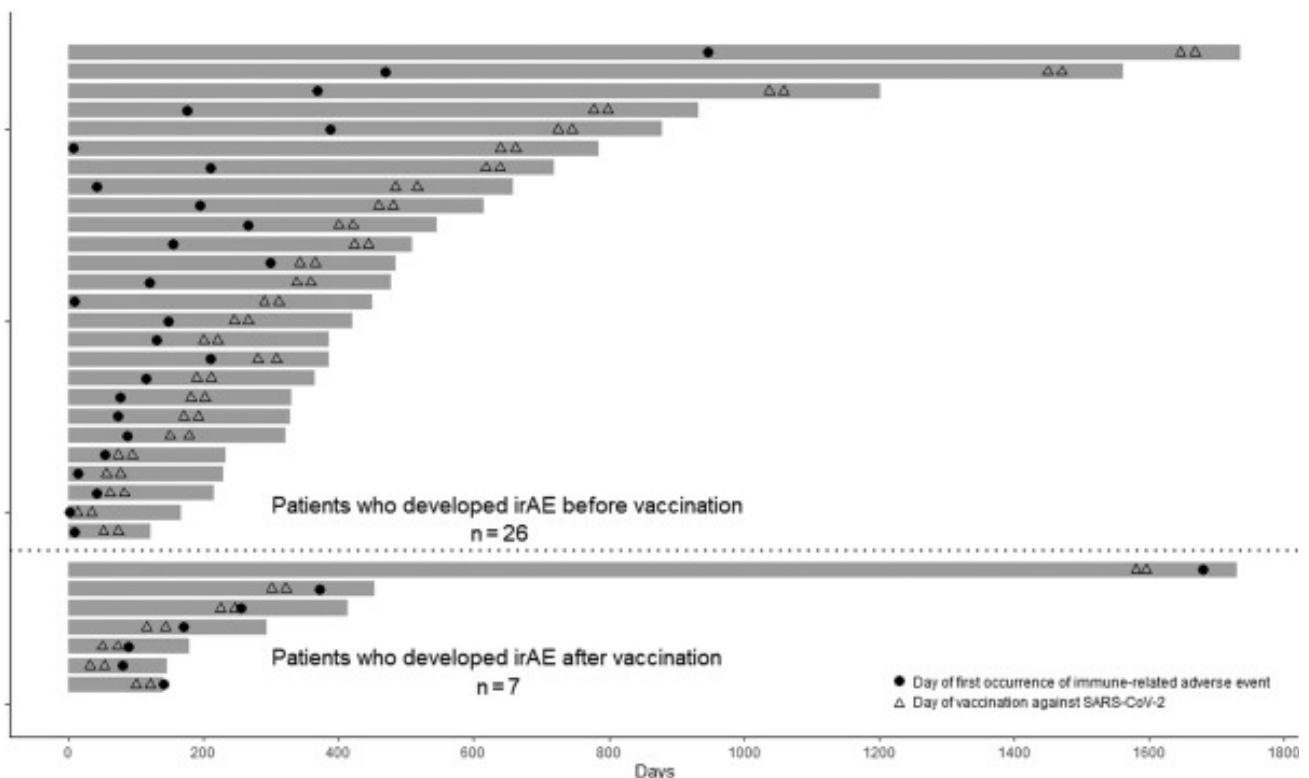


Figure 1 Demonstrating patients developing an iaAE (irAE).

In conclusion, COVID-19 vaccination, particularly, mRNA-COVID-19 vaccination among ICIs-treated-lung-cancer patients should be assessed due to being classified as a vulnerable population.

The plot demonstrates the total observation period (d) from the initiating date of the immune checkpoint inhibitors (ICIs) treatment

regimen to the end-observation date. The two-doses-of-mRNA-vaccine-against-SARS-CoV-2 (COVID-19) dates are indicated by triangles, and the date of onset of an iaAE(irAE) is indicated by a dot for each of the 26 patients who developed an iaAE(irAE) before vaccination and the seven patients who developed an iaAE(irAE) after vaccination.¹

(iaAE : immune-associated adverse event; ICI : immune checkpoint inhibitor; irAE : immune-related adverse event; mRNA : messenger Ribonucleic Acid; SARS-CoV-2 : severe acute respiratory syndrome coronavirus 2 (COVID-19)).

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Conflict of interest

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