

Review of: "Validation of an online application to identify potential immune-related adverse events associated with immune checkpoint inhibitors based on the patient's symptoms"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

The approach using general non-specific symptoms, organ involvement and biological abnormalities to determine the relationship between symptoms and immunotherapy is original. This is an unmet need for clinician.

The main interest of this web App is that it allows us to remind clinicians that unusual toxicities of immunotherapy should be suspected in front of aspecific symptoms like Fatigue, upper gastro-intestinal symptoms. The web application puts a warning sign in front of those common and aspecific symptoms that could be fatal like adrenal insufficiency or myocarditis. This is a remarkable and major point of this application.

One of the main limitations here is that immune related adverse events were selected only from reported cases and over a limited period (2 years). As discussed by the authors, this is a significant statistical bias because adrenal disorders, severe cutaneous adverse events, and diabetes are only the most frequently observed toxicities with immunotherapy.

It would have been useful to add a diagnostic orientation tree proposed for the application when the imputability is considered probable. This may be a point that could improve this application and help clinicians in routine practice.

If the authors wanted to collect real life data, and not data reported from clinical trial, it could have been more precise and helpful to collect data from a pharmacovigilance database or national healthCare database.

It also could have been interesting to confront the web application with a system that collect patient reported outcomes (PRO). Studies have proved that PRO allowed to collect more information and adverse event than a clinician evaluation alone.

PRO also allowed patients to be actively involved and engaged in their own health situation, and to improve their quality of life.

To conclude, It is a useful application to remind clinicians that every new symptoms occurring under immunotherapy may be related to the treatment and should be investigated.