



## Abstract N°: 181

### **Title: Understanding real-world experiences and the impact of COVID-19 vaccination on the associated use of biologics in patients with psoriasis and psoriatic arthritis through social media monitoring**

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#### **Introduction**

COVID-19 pandemic poses an unprecedented challenge to patients with immune-mediated inflammatory diseases (IMIDs); concerns have been raised regarding the risk of biologic therapies used to treat IMIDs and the effect, if any, of COVID-19 vaccination on biologic therapy<sup>1,2</sup>. Health-related social media research is a common tool used to gain insight on patients' perspectives. The objective of this analysis was to collect patient perspectives on COVID-19 vaccination in biologic-treated patients with psoriasis (PsO) and/or psoriatic arthritis (PsA) using Social Media Monitoring.

#### **Material and Methods**

A search was performed using social media platforms. English language and translated content collected from the United States (USA), United Kingdom, France, Germany and Spain between 01-2021 and 03-2021 were used. The Social Studio® platform was used to provide downloadable links of posts from social media based on pre-specified keywords. Natural language processing was used to assess the relevance of extracted posts, (e.g. removing duplications, market reports, non-working links). Conversational clustering and thematic analysis was employed to identify key conversations/themes related to COVID-19 vaccinations, biologic therapy and PsO/PsA.

#### **Results**

In total, 10,922 outputs were extracted using pre-defined keywords. 624 filtered posts were identified and manually analysed to derive insights. Females were most active online, PsO was the most discussed condition and secukinumab and adalimumab were the most discussed biologics alongside COVID-19 vaccines (See **Fig 1** for demographics). Patient perceptions of COVID-19 vaccination could be elucidated from 55.1% (n=344) posts. 52% of these posts identified that patients with IMIDs were sceptical or expressed negative perceptions about receiving a COVID-19 vaccine (**Fig 2A**). Main factors driving this perception were potential side effects post vaccination, effect on their autoimmune conditions and lack of trial data. Most frequent healthcare professional (HCP) advice reported by patients was to delay treatment administration through the two vaccine doses, and recommence a week after the second vaccine dose. Safety concerns were a prominent topic of discussion; patients had no information on the interaction of the COVID-19 vaccine with biologic therapy and did not know what effect it had in immuno-compromised patients (**Fig 3**). Most patients followed the advice of their (HCP) for treatment schedule modification but ~25% of patients reported making this decision themselves (**Fig 4**). Around 60% of PsO patients reported no impact on their condition post-vaccination. PsO patients reported manageable side effects while PsA patients reported more severe side effects of vaccination experiencing high level of pain, weakness and fatigue post-vaccination.

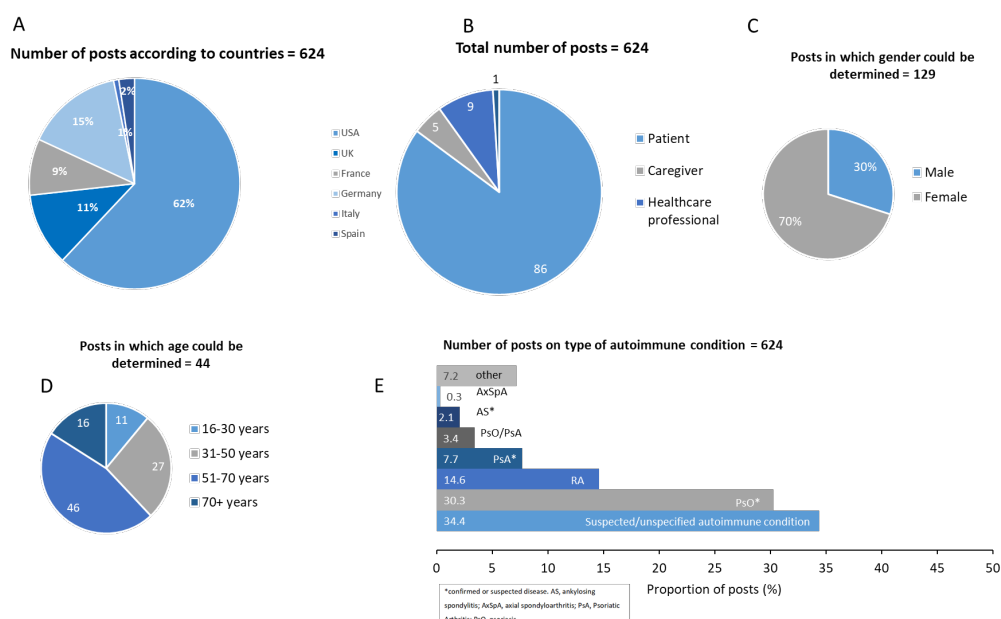
## Discussion

This analysis collected real-world health-related social media insights on the impact of COVID-19 vaccination on patients with PsO and PsA. Important causes of vaccine hesitancy in patients were safety concerns and concerns about aggravation of the underlying condition; this highlights the need to identify valuable strategies to educate and support patients with IMIDs on disease management, effects of COVID-19 vaccinations on their disease states, as well as their safety and effectiveness during biological use.

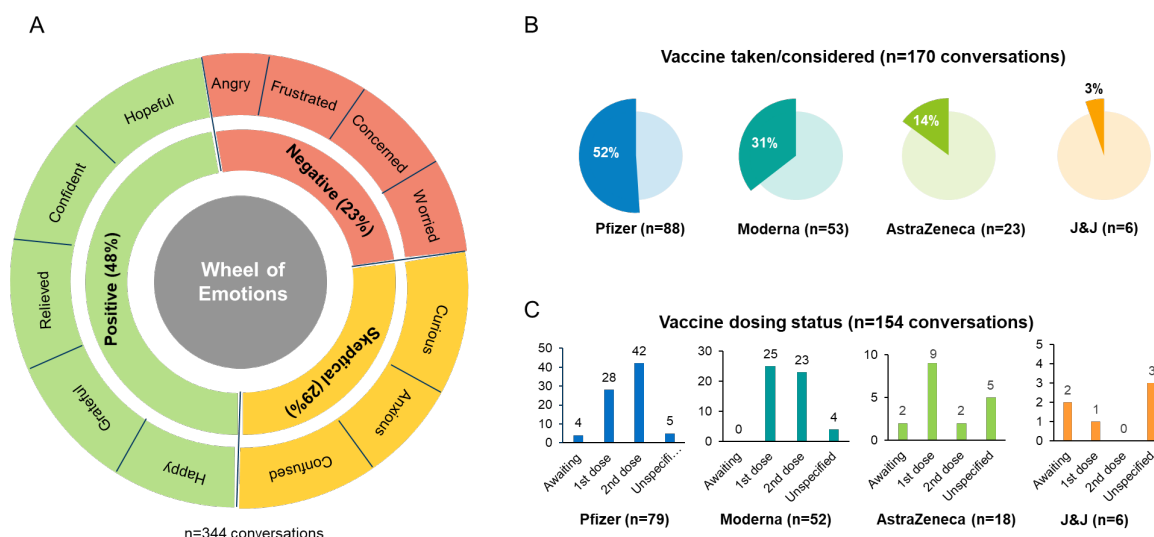
## References:

1. Rodriguez Y et al. *J Autoimmun.* 114:102506.
2. Velikova T and Georgiev T. *Rheumatol Int.* 2021; 41(3):509-518.

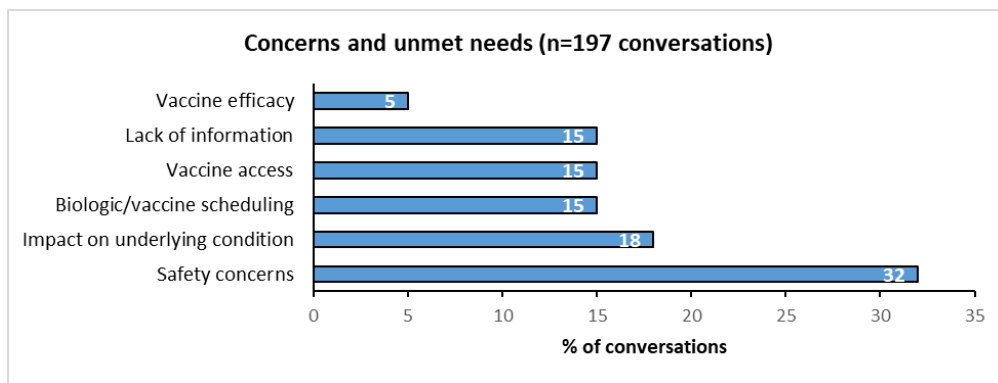
**Figure 1: Demographics of data collected including contributions according to countries (A) type of contributor (B), gender (C), age (D) and type of autoimmune disease (E).**



**Figure 2: Patient's perception of vaccination.** Overview of patient perception to COVID-19 vaccination (A), COVID-19 vaccination being taken or considered (B) and COVID-19 vaccination dosing status (C).



**Figure 3: Concerns and Unmet needs of the patients on vaccines**



**Figure 4: Decision Influencers for treatment schedule modification**

