Prevalence among patients aged 2–19 years within a large southern California health system was 30 per 10 000 when cases were identified by at least one diagnosis code and 19 per 10 000 when confirmed with record review. In a network of GP practices across the UK, prevalence was observed to be 55 per 10 000 among children aged under 10 years of age. Prevalence estimated by at least one International Classification of Diseases (ICD) code in a German insurance database was 71 per 10 000 among children under 18 years.

These results should be interpreted in the context of the limitations of analyses based on claims or electronic health record data. Algorithms relying on codified data cannot capture undiagnosed patients or those seeking care outside of the specified systems, and this may lead to underestimation. Conversely, studies based on electronic health records may also overestimate disease prevalence as the population of healthcare seekers tends to have poorer health than the general population. While ICD-10 codes for psoriasis have been validated in several distinct external samples, the case definition was not validated within the Explorys database, as chart-level information is not accessible for reasons of confidentiality. In particular, the recording of race and ethnicity may be subject to misclassification, although our findings with respect to the prevalence ratio between White and Black patients are consistent with previous studies in adults. Despite these limitations, our analysis contributes important information on psoriasis prevalence in the full age range of the paediatric population by age and importantly by race in a large patient cohort with any insurance status in the USA.

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Conflicts of interest: A.G. is an advisor for AbbVie, Aclaris Therapeutics, Anaptys Bio, Arista Therapeutics, Boehringer Ingelheim, Bristol Myers Squibb, Incyte, InflaRx, Insmed, Janssen, Novartis, Pfizer, UCB and Viela Biosciences, and receives honoraria.

Ethics statement: This study was approved by the human subject committee of the Feinstein Institutes for Medical Research at Northwell Health.

Data Availability Statement: Data available on request from the authors.

Evaluating risk of bullous pemphigoid after mRNA COVID-19 vaccination

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Dear Editor, Approximately 3·3 billion people across the globe are fully vaccinated against COVID-19. However, there remains a significant proportion of populations who are experiencing vaccine hesitancy, for reasons that can include concern about vaccine-induced autoimmunity. Bullous pemphigoid, the most common autoimmune blistering skin disease, has been reported as a rare side-effect of mRNA COVID-19 vaccines. Proposed mechanisms involve nonspecific bystander immune activation, molecular mimicry, and in the context of the COVID-19 pandemic, a novel consequence of mRNA vaccine technology. In this study, we evaluated the relationship between de novo development of bullous pemphigoid and mRNA COVID-19 vaccination in a large global health research network.

We performed a retrospective cohort study using the TriNetX analytics network (trinetx.com; Cambridge, MA, USA), a federated health research network that aggregates health records from 63 healthcare organizations, compromising 70 million patients. We included people ≥18 years of age who between 15 December 2020 and 15 June 2021 received either a first or second dose of the Moderna (mRNA-1273) or Pfizer/BioNTech (BNT162b2) vaccine (cases) or were diagnosed with acne, seborrhoeic keratosis or melanocytic naevi and had no history of COVID-19 vaccination (controls). We agreed that diagnoses included in the control cohort were to be conditions with no known association with bullous pemphigoid. Multiple diagnoses were included to increase cohort size for robust propensity matching. Data collection was performed in December 2021 to ensure all participants had an opportunity for 24 weeks of follow-up. New-onset bullous pemphigoid (ICD-10 code L120) related to mRNA COVID-19 vaccine administration was defined as the first-ever diagnosis occurring within 24 weeks. People with pemphigus vulgaris (ICD-
Given that participants may have been vaccinated¹, David C. Kaelber,²

The relative risk compares the risk of bullous pemphigoid within 24 weeks after mRNA COVID-19 vaccination against participants in control cohorts after matching for age, sex, race, ethnicity, neurological disease (Parkinson disease, demyelinating disease, other degenerative disorders of the nervous system), psychiatric disease (mood disorders, schizophrenia), cerebral infarction and malignancy, as well as use of dipeptidyl peptidase-4 inhibitors (linagliptin, alogliptin, sitagliptin, saxagliptin), checkpoint inhibitors (pembrolizumab, nivolumab, atezolizumab, ipilimumab), loop diuretics and spironolactone. CI, confidence interval. *Participants with outcome prior to the time window were excluded from results.² Rates per 10 000 person-years were calculated as follows: [(persons with bullous pemphigoid)/(persons in cohort)] × (365/186) × 10 000.

Our results suggest mRNA COVID-19 vaccination is not associated with increased risk of new-onset bullous pemphigoid. We hope that healthcare professionals may use the findings reported herein to counsel patients experiencing vaccine hesitancy over concerns of de novo autoimmunity. Our study has limitations to consider when interpreting the results. Firstly, our study reports on the risk of new-onset bullous pemphigoid and does not offer insight regarding whether vaccination can cause a flare or an exacerbation of the disease. In addition, risk of bullous pemphigoid may differ between the first or second dose of mRNA COVID-19 vaccine or by Moderna vs. Pfizer vaccination, but we did not investigate this in our report. Other limitations to consider include the use of population data, which have inherent misclassification bias from the use of ICD codes. We cannot ascertain completeness of electronic medical records. Lastly, participants may have developed bullous pemphigoid without seeking care.

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Conflicts of interest: the authors declare they have no conflicts of interest.

Data Availability Statement: The data that support the findings of this study are available from TriNetX Restrictions apply to the availability of these data, which were used under license for this study. Data are available MB with the permission of TriNetX.