center (1) and other university outpatient clinics (2). Possibly DMARD-therapy may protect against the occurrence of cytokine storm and vasculitic complications, which lead to severe courses and lethal outcomes in some of the patients. The data support the recommendation not to discontinue DMARDs for fear of COVID-19.

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POS1255

REACTOGENICITY OF SARS-COV-2 VACCINES IN PATIENTS WITH AUTOIMMUNE AND INFLAMMATORY DISEASE

M. Yang¹, P. Katz¹, D. Paez¹, A. Carvidi¹, M. Matloubian¹, M. Nakamura¹, L. S. Gensler¹. ¹University of California, San Francisco, Division of Rheumatology, San Francisco, United States of America

Background: Patients with autoimmune disease often require immunosuppressive medications that may increase their risk of developing severe illness from COVID-19. The importance of immunization in this population is particularly high. While the studied vaccines show efficacy in the general population, nothing is known regarding the immune response or safety profile in patients with autoimmune disease and those taking immunomodulatory medications.

Objectives: To assess the safety profile and degree of adverse events from SARS-CoV-2 vaccines in patients with autoimmune and inflammatory disease.

Methods: This study is part of a larger prospective observational study examining the immunogenicity and safety profile of the SARS-CoV-2 vaccine in patients

with immune-mediated diseases taking immunomodulatory medications. Adults with an immune-mediated disease scheduled to receive either a Pfizer or Moderna SARS-CoV-2 vaccine were enrolled in this study. Subjects participated in 3 study visits (pre-vaccine, dose 1 (D1) and dose 2 (D2)) where blood, for immunologic assays, and clinical data were collected. Assessments of adverse events (AE), including local and systemic symptoms and validated degree of AE severity were solicited within 7 days of receiving each vaccine dose.

Results: To date, 70 patients with autoimmune and inflammatory disease have been enrolled. Demographic and clinical characteristics are shown in Table 1. Distribution of current immunomodulatory medications included prednisone 18.6%, conventional synthetic DMARD 55.7%, targeted synthetic DMARD 4.3%, and biologic DMARD 68.5%. Almost all participants experienced an adverse event following vaccination (D1 96%, D2 100%). Following D1 AEs were generally mild (76.5%) whereas following D2 a large portion of patients experienced AEs that were moderate (47.8%) and severe (30.5%). Injection site pain was the most common AE following both doses followed by arthralgias (D1 21.6%, D2 78.2%), fever (D1 21.6%, D2 70%) and fatigue (D1 21.6%, D2 65.2%) (Figure 1).

Figure 1. Solicited Local and Systemic Adverse Events. Percentage of participants who had endorsed an adverse event within 7 days of first or second dose of SARS-CoV-2 Vaccine. 'Other' symptoms included chills, blurry vision, brain fog and dizziness.

Conclusion: Patients with autoimmune and inflammatory disease experience a significant burden of adverse events following SARS-CoV-2 vaccination with both frequency and severity appearing greater than that of the reported results from the vaccine clinical trials. Several of the endorsed AEs such as fever, fatigue and arthralgias can also be commonly seen in rheumatologic diseases, mimicking flares. While SARS-CoV-2 immunization is crucial in patients with autoimmune diseases, this study demonstrates the importance of understanding the AEs experienced by this patient population to better inform patients of possible expected side effects of SARS-CoV-2 vaccination and further management in the future.

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POS1256

SINGLE DOSE TOCILIZUMAB PHARMACOKINETICS IN GLUCOCORTICOID PRE-TREATED COVID-19 PATIENTS DURING CYTOKINE STORM SYNDROME HYPERINFLAMMATORY EPISODE: LESS IS MORE

N. Boone¹, S. Ramiro², D. J. Moes³, R. Mostard⁴, C. Magro Checa², C. Van Dongen⁵, M. Gronenschild⁴, E. Van Haren⁴, J. Buijs⁵, R. Peeters⁵, D. Wong¹, R. B. M. Landewe^{2,6} on behalf of COVID-19 Study group Zuyderland Medical Centre. ¹Zuyderland Medisch Centrum Sittard-Geleen, Clinical Pharmacy, Pharmacology and Toxicology, Geleen, Netherlands; ²Zuyderland MC, Rheumatology, Heerlen, Netherlands; ³Leiden University Medical Center (LUMC), Clinical Pharmacy, Pharmacology and Toxicology, Leiden, Netherlands; ⁴Zuyderland MC, Pulmonology, Heerlen, Netherlands; ⁵Zuyderland Medisch Centrum, Internal Medicine, Brunssum, Netherlands; ⁶Amsterdam UMC, locatie AMC, Amsterdam Rheumatology & Clinical Immunology Center, Amsterdam, Netherlands

Table 1. Demographic and Clinical Characteristics of Participants

Parameter N (%)	N=70
Age [years], mean (SD)	48.3 ± 16.4
Age group	
< 65	53 (75.7)
65+	17 (24.3)
Gender	
Female	48 (68.6)
Male	20 (38.5)
Other	2 (2.9)
Race	
White	47 (67.1)
Asian	14 (20.0)
Hispanic	8 (11.4)
Black	1 (1.4)
BMI [kg/m ²], mean (SD)	25.0 ± 5.4
Immunologic Diagnosis	
Rheumatoid Arthritis	21 (30.0)
Spondyloarthritis*	21 (30.0)
Systemic Lupus Erythematosus	8 (11.4)
Connective Tissue Disease, Other†	12 (17.1)
Vasculitis	3 (4.2)
Inflammatory Bowel Disease	7 (10.0)
Autoinflammatory Syndrome	5 (7.1)
Multiple Sclerosis	2 (2.9)
IgG4 Related Disease	2 (2.9)
Disease Duration [years], mean (SD)	9.0 ± 5
Medications	
Prednisone	13 (18.6)
DMARDs	
Hydroxychloroquine	16 (22.9)
Methotrexate	15 (21.4)
Sulfasalazine	6 (8.6)
Tofacitinib	3 (4.3)
Azathioprine	2 (2.9)
Biologics	
TNF inhibitor	33 (47.1)
Rituximab	7 (10)
Abatacept	6 (8.6)
IL-23 inhibitor	2 (2.9)

* Spondyloarthritis includes Axial Spondyloarthritis and Psoriatic Arthritis. † Other Connective Tissue Disease includes scleroderma, Sjogren's syndrome, polymyositis, and UCTD.