Table 1. Bivariate analysis of aspect related to work from home and well-being, anxiety and depression in the second REUMAVID phase

	Mean ± SD or n (%)								
	Poor well-being	Good well-being	P-value	Risk of anxiety	No risk of anxiety	P-value	Risk of depression	No risk of depression	P-value
WIFI N: 354	3.8 ± 1.1	3.9 ± 1.1	0.534	3.8 ± 1.2	3.9 ± 1.0	0.193	3.8 ± 1.1	3.9 ± 1.1	0.264
Computer or laptop N: 352	3.9 ± 1.1	4.1 ± 1.0	**0.031**	3.8 ± 1.2	4.2 ± 0.9	**0.002**	3.9 ± 1.1	4.1 ± 1.1	**0.049**
Workstation N: 347	3.0 ± 1.4	3.5 ± 1.3	**<0.001**	2.9 ± 1.4	3.6 ± 1.2	**<0.001**	2.9 ± 1.4	3.4 ± 1.3	**<0.001**
Webcam N: 342	3.4 ± 1.5	3.7 ± 1.4	0.069	3.4 ± 1.5	3.7 ± 1.4	**0.043**	3.4 ± 1.3	3.6 ± 1.5	0.055
Telephone[2] N: 350	3.9 ± 1.2	4.0 ± 1.3	0.289	3.9 ± 1.3	4.0 ± 1.2	0.484	3.8 ± 1.2	4.0 ± 1.3	**0.034**
Light N: 354	3.6 ± 1.2	4.0 ± 1.1	**<0.001**	3.6 ± 1.2	4.0 ± 1.1	**0.001**	3.5 ± 1.2	4.0 ± 1.1	**<0.001**
Noise N: 353	3.3 ± 1.3	3.8 ± 1.4	**<0.001**	3.2 ± 1.4	3.9 ± 1.2	**<0.001**	3.2 ± 1.4	3.8 ± 1.3	**<0.001**
Calmness N: 353	3.3 ± 1.4	4.0 ± 1.2	**<0.001**	3.2 ± 1.4	4.0 ± 1.1	**<0.001**	3.1 ± 1.4	3.9 ± 1.3	**<0.001**
Temperature N: 353	3.6 ± 1.2	3.8 ± 1.2	0.053	3.5 ± 1.3	3.9 ± 1.1	**0.008**	3.5 ± 1.2	3.8 ± 1.2	**0.039**

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POS1236

THE IMPACT OF ANTI-SARS-COV-2 VACCINES IN A MULTICENTER COHORT STUDY OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Vulnerable subjects, including systemic lupus erythematosus (SLE) patients have been prioritised to receive anti-SARS-CoV-2 vaccine. Questions have been raised about the effect of vaccines on immunity and their potential role as trigger for flare. Few data about the safety of these vaccines in SLE are available

Objectives: To investigate the safety of different anti-SARS-CoV-2 vaccines in SLE

Methods: Data on SLE patients who have received anti-SARS-CoV-2 vaccine (from 12/2020 to 10/2021) were collected. Patients referred to 7 SLE tertiary centres (Lupus Clinic, ASST Pini-CTO, Milan; Nephrology Unit of Ospedale Giovanni Bosco, Turin; IRCCS Humanitas Research Hospital; Renal and Rheumatology Units, San Gerardo Hospital, Monza; ASST Spedali Civili Brescia; Lupus Clinic IRCCS Ospedale S. Raffaele, Milan, Italy; IRCCS Policlinico, Milan)

Results: 452 SLE patients who had received anti-SARS-CoV-2 vaccines were included (91% BNT162b2 mRNA, 8% mRNA-1273, 1% ChAdOx1-S). 12 (3%) were off therapy, 71% were on low-medium dose prednisone, 83% on anti-malarials, 50% were treated with an immunosuppressant. 9 patients transiently discontinued therapy. 119 (26%) reported adverse symptoms after the first/second shot (12% and 21%) The most frequent were fever, local reaction, fatigue and

Table 1. distribution of demographic and SLE characteristics according to sides effects and disease flares after vaccination

	Side effects (n=119)	No side effects (n=333)	p-value (<0.05)	Disease flare (n=19)	No disease flare (n=430)	p-value (<0.05)
Age, years, median (IQR)	46 (33.5-54)	48 (35.7-57)	0.18	52 (39.5-56.0)	48 (35.0-56.9)	0.849
Disease duration, months, median (IQR)	138 (76-262)	126 (73-193)	0.30	144 (122-242)	127 (73-195)	0.249
MSK, %	84.9	84.4	1.00	78.9	84.8	0.514
Mucocutaneus, %	71.4	62.8	0.094	57.9	64.5	0.624
Renal, %	42.0	52.3	0.069	52.6	49.4	0.819
NPSLE, %	13.4	9	0.215	5.3	10.4	0.708
Cardiopulmonary %	22.7	19.8	0.510	26.3	20.3	0.562
Hematological, %	32.8	33	1.00	42.1	32.6	0.455
Constitutional symptoms %	48.7	30	**0.0003***	26.3	35.3	0.473
Gastrointestinal %	4.2	3.3	0.772	5.3	3.5	0.503
Ophthalmic %	0.8	3.3	0.197	0	2.8	1.00
Secondary APS %	10.9	10.5	0.864	5.3	10.9	0.708
aPL positivity %	26.2	33.6	0.137	26.3	31.9	0.802
Anti-dsDNA positivity %	30.7	27.4	0.545	55.6	27.1	**0.0142***
ESR, mm/h, median (IQR)	14 (7-19)	13 (7-22)	0.730	19 (10-24)	13 (7-21)	0.125
CRP, mg/dL, median (IQR)	0.5 (0.1-0.5)	0.5 (0.3-0.6)	0.312	0.42 (0.13-0.50)	0.50 (0.30-0.5)	0.464
Urinary abnormalities, %	9.2	21.9	0.0023	21.1	18.5	0.764
Moderate or high DAS before vaccine, %	16	9.3	0.060	26.3	10.4	**0.0474***
No therapy before vaccine, %	0	3.6	**0.0419***	0	2.8	1.00
At least 1 immunosuppressant, %	63	46.8	**0.0027***	73.7	50.1	0.059
Mycophenolate, %	31.9	23.1	0.066	42.1	24.7	0.106
Methotrexate, %	5.9	6.6	1.00	5.3	6.5	1.00
Belimumab, %	21.8	13.5	**0.0396***	36.8	14.8	**0.0184***
Rituximab ever, %	11.8	13.5	0.751	5.3	13.4	0.490
Prednisone, %	74.8	70	0.347	78.9	70.9	0.607

arthralgias. Nineteen (4%) patients flared up after immunisation with a 7 days median time to relapse. Baseline demographics, SLE characteristics and therapy stratified by adverse events and disease flare are reported in Table 1. Anti-dsDNA positivity, moderate/high DAS before vaccine and use of Belimumab were significantly more frequent in the group of patients flared. These patients displayed a significantly higher rate of adverse events after vaccination. Flares consisted mainly musculoskeletal and constitutional manifestations (32%), involvement of renal (21%), cardio-respiratory (16%), hematological (16%) or mucocutaneous domains (10%) was less frequent

Conclusion: our reassuring data confirm that anti-SARS-CoV-2 vaccine is safe in SLE patients and should be recommended in this clinical setting, as potential benefits widely outweigh the risk of adverse events. Treatment adjustment might be considered with the aim of minimizing the risk of side effects and/or flare, while ensuring a satisfying protection against infection

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POS1237 SARS-COV-2 MRNA VACCINE IMMUNOGENICITY IN CHRONIC INFLAMMATORY ARTHRITIS ON DMARD THERAPY

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Background: Patients with chronic inflammatory arthritis (CIA) are at increased risk for the development and mortality from COVID-19[1]. Vaccinations are integral to the management of these conditions. Disease-modifying antirheumatic drugs (DMARDs) used to treat CIA have the potential to blunt the immune response and efficacy of vaccinations[2]. There is little data on the effect of DMARDS used for CIA on the response to novel mRNA vaccines, limiting guidelines to direct therapy.

Objectives: Assess the antibody response (ABR) to the SARS-CoV-2 mRNA vaccines in patients with CIA on treatment with either methotrexate (MTX), tumor necrosis factor inhibitors (TNFi), or both with healthy controls. Determine the effect of interrupting therapy after vaccination in patients with CIA on the ABR to the vaccine.

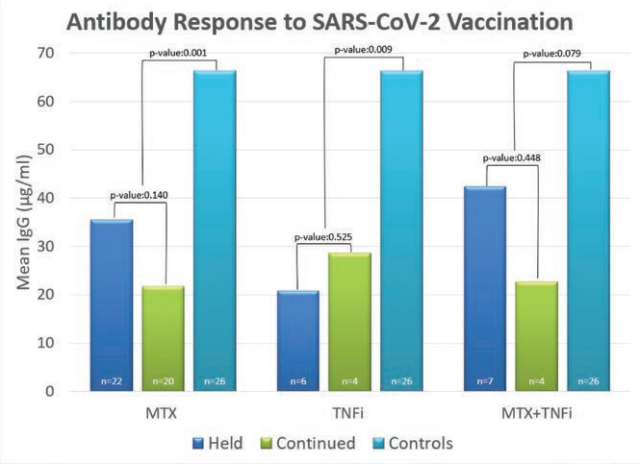
Methods: 63 patients with rheumatoid or psoriatic arthritis on MTX, TNFi or both were recruited from a community-based rheumatology practice. All subjects received two doses of a mRNA COVID vaccine. Use of hydroxychloroquine (HCQ), NSAID's, and prednisone (Pred) ≤10mg daily were allowed. Those with prior COVID infection were excluded, as determined by SARS-CoV-2 nucleocapsid assay. 26 healthy age-matched controls were obtained from banked blood from Labcorp. IRB approval was obtained, and patients were consented to participate in the study. SARS anti-receptor binding domain IgG antibodies were measured by electro chemiluminescent immunoassay 90-120 days post initial vaccine dose. Patients were divided into 3 groups based on therapy:

1. MTX monotherapy
2. TNFi with eternacept (ETN) or adalimumab (ADA)
3. A combination of MTX with either ETN or ADA

Each of the groups were subdivided into two categories:

1. Continued treatment uninterrupted at the time of each of the two vaccines.
2. Held treatment for two weeks after each vaccine. Statistical significance (p<.005) determined using one way ANOVA with Scheffe procedure and Student's T-test.

Results: The 63 patients with CIA had a significantly lower ABR to vaccine compared with healthy controls (p=0.001). Further analysis was limited by sample size: The MTX held group had a higher ABR than the MTX continued group (mean IgG=35.5 vs 21.74; p=0.14), demonstrating a trend toward increased immunogenicity. There was a similar ABR to vaccine between those on TNFi who held vs continued therapy (mean IgG 20.83 vs 28.65; p=0.525). Combination MTX +TNFi held vs continued groups demonstrated a trend toward increased immunogenicity when holding therapy post vaccine (mean IgG 42.4 vs 22.7; p=0.44). All treatment groups were comparable in Pred, HCQ, NSAID use, age, Rapid 3 score, and time between vaccination and blood draw for antibody levels (VI).



Conclusion: The ABR in patients with CIA to the mRNA vaccine appeared to be blunted by ongoing therapy with MTX. This effect was attenuated by holding MTX post-vaccine. There was no significant difference in the ABR to vaccine in patients on TNFi who held vs continued these agents after vaccine, due to small sample size. Patients with CIA on DMARD therapy had a significantly lower ABR to the vaccine compared to healthy controls. Our findings need further validation in a larger cohort. Clinicians may consider holding MTX for two weeks post vaccination to optimize the immune response to the vaccine.

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Table 1. Antibody response to Vaccination

	MTX		TNF		MTX + TNFi		Controls			
Variable	M	SD	M	SD	M	SD	M	SD	p value	Test
IgG	28.95	30.01	23.96	14.77	35.27	38.81	66.31	38.06	0.001	ANOVA
Drug	**Variable**		**Held**			**Continued**			**p value**	
		n	**M**	**SD**	**n**	**M**	**SD**			
MTX	Age	22	67.95	7.33	20	71.3	11.07		0.251	T-test
	IgG	22	35.5	29.92	20	21.74	29.13		0.14	
	VI	22	97.27	13.71	20	98.15	10.19		0.817	
TNFi	Age	6	64.5	10.19	4	70.25	13.77		0.467	
	IgG	6	20.83	10.07	4	28.65	20.9		0.525	
	VI	6	98.67	22.24	4	93.75	12.29		0.701	
MTX + TNFi	Age	7	63.86	6.36	4	62.75	11.53		0.839	
	IgG	7	42.43	45.11	4	22.75	24.92		0.448	
	VI	7	100	19.09	4	97.75	22.59		0.864	
Variable		**CIA**			**Controls**				**p value**	
	n	**M**	**SD**	**n**	**M**	**SD**				
Age	63	63.05	9.61	26	52.31	8.84			0.001	T-test
VI	63	97.79	14.31	26	88.65	5.43			0.002	

M: Mean; VI: Vaccine Interval in days