Alliance assessment criteria (<https://rheum-covid.org/>). Information about Disease Modifying Anti-Rheumatic Drug (DMARD) drug use was also recorded. Participants' serum samples were collected for quantitative serological assessment of antibodies to SARS-CoV-2 using the Mologic Enzyme-Linked Immuno-Sorbent Assay (ELISA) IgG kit. The optical density values were plotted against time using a normalisation as previously described (1). A cut-off above 0 indicated positive serology.

Results: A total of 114 subjects were recruited into the study. Subjects were recruited if they had suspected Covid symptoms. Of the population recruited, the total number subsequently testing positive for SARS-CoV-2 was $n=59$ (either on serology or PCR). The number of subjects with autoimmune conditions diagnosed with Covid-19 was 32, with 30 subjects being symptomatic (the asymptomatic 2 subjects were excluded from further analyses). Of the 30 symptomatic subjects, the average age was 56, with a female to male ratio of 19:11. The most prevalent diagnoses were RA (30%), Psoriatic Arthritis (16.7%), SLE (10%), sarcoidosis (10%), Ulcerative Colitis (10%), Crohn's disease (10%), seronegative inflammatory arthritis (6.7%), Sjogren's (3.3%) and Juvenile Idiopathic Arthritis (3.3%). The majority were on csDMARDs (60%), biologic DMARDs (20%), tacrolimus (3.3%) and the remaining 16.7% were not on DMARDs. Most subjects required treatment in hospital (56.7%), a smaller number required high dependency care (6.7%) and the rest were treated at home (36.6%). The majority required no oxygen (63.3%), with a further 30% requiring oxygen and 6.7% needed more supportive care i.e. CPAP/ventilation. We also had a matched control group ($n=29$) of subjects who developed SARS-CoV-2 but had no underlying autoimmune conditions. These subjects had a mean age of 55, female: male ratio 18: 11. Of these 31% had home management, 55.2% had ward level treatments and 13.8% had intensive care treatment. Of the controls, 48.3% did not require oxygen, 37.9% needed simple oxygen and 13.8% were on CPAP. A total of 35 subjects from the original study have attended for follow-up visits. Antibody titres for IgG using the Mologic ELISA detection assay were compared at two visits for the control and autoimmune group. Results showed that subjects with autoimmune conditions and those without who developed SARS-CoV-2 showed very similar antibody titres by optical density (OD) (Figure 1) and maintained antibody responses beyond 6 months in most cases.

Conclusion: Serological assays can assist in the understanding of disease severity of SAR-CoV-2 infection. They can be a useful tool for patient surveillance, especially in people who are on immunomodulatory drugs and are being seen in Rheumatology services. Future work is needed to assess the duration and potential protective nature of humoral antibody responses to SARS-CoV-2.

REFERENCES:

- [1] Staines HM, Kirwan D, Clark DJ et al. Dynamics of IgG seroconversion and pathophysiology of COVID-19 infections. medRxiv preprint doi: <https://doi.org/10.1101/2020.06.07.20124636>.

Figure 1.

Disclosure of Interests: Kathryn Biddle: None declared, Soraya Koushesh: None declared, Anna Blundell: None declared, David Clark: None declared, Sanjeev Krishna: None declared, Nidhi Sofat Consultant of: Advisory work for Pfizer and Eli Lilly, Grant/research support from: Received grants from Bristol Myers Squibb and Pfizer for Investigator Initiated Studies.

DOI: 10.1136/annrheumdis-2021-eular.1736

POS1196

COVID-19 VACCINE WILLINGNESS IN RA? RESULTS FROM THE RA LOUVAIN BRUSSELS COHORT

T. Sokolova¹, V. Pirson¹, T. Xavier¹, E. Curraj², L. Bricman¹, E. Sapart¹, S. De Montjoye¹, S. Dierckx², A. Avramovska¹, P. Durez¹. ¹Cliniques Universitaires Saint-Luc – Université catholique de Louvain (UCLouvain) – Institut de Recherche Expérimentale et Clinique (IREC), Rheumatology, Brussels, Belgium; ²CHU Mont-Godinne, UCLouvain, Rheumatology, Mont-Godinne, Belgium

Background: Over 2 million deaths from the COVID-19 disease have been reported in the world. Since no antiviral treatment is available, the vaccination is the most important option to fight the SARS-CoV-2 infection. Patients living with rheumatoid arthritis (RA) affecting the immune system or under immunosuppressive agent will be considered as a high risk population and will start

the vaccination shortly. But many patients could decline the vaccine for several reasons including safety concerns.

Objectives: The aim of this study is to evaluate the proportion of patients with RA who are favourable to COVID-19 vaccination, to know the reasons to decline and to analyse the characteristics of these patients.

Methods: We included patients with RA from the UCLouvain Brussels cohort who met the ACR/EULAR 2010 classification criteria. A simple and standard questionnaire was distributed to patients who attended rheumatology out patient and day care clinic from 14 december 20 to 14 januari 21. All patient and RA characteristics (Age, gender, education, smoking habits, disease duration, ACPA, RF, DAS28-CRP, HAQ and therapies) were collected at the same time.

Results: Data from 460 eligible RA patients were analyzed. The average age of the population is 58.21 years. 72% of the patients are women. 21% are smokers and 65% are positive for anti-citrullinated protein antibody (ACPA) with a mean DAS28-CRP of 2.39 and a mean HAQ of 0.821.

281 patients (61%) indicated they would receive the vaccine as soon as it is available. For the 179 patients (39%) who decline, the reasons for not having vaccine were no trust in the vaccine at this time (53%), fear of side effects (28%), opposition to vaccine (4%), previous SARS-CoV-2 infection (2%) and unknown (5%).

Interestingly, there were differences among RA patients not willing to receive the vaccine. Patient under the age of 50, women, low education grade, smokers, presence of RF/ACPA and treatment with a bioDMARD were less willing to receive the vaccine. No differences were observed for RA disease duration, HAQ and DAS28-CRP (see Table 1).

Table 1. Characteristics of RA population and correlation between groups.

	TOTAL n=460	VACCIN-YES n=281 (61%)	VACCIN-NO n=179 (39%)	
Age, mn	58,21 +/-0,71	60,37 ± 0,9004	54,82 ± 1,090	p=0.0001*
Group Age <30 yrs	25 (5%)	15 (5%)	10 (6%)	
Group Age =31-50 yrs	112 (24%)	53 (19%)	59 (33%)	
Group Age =51-70 yrs	209 (45%)	127 (45%)	82 (46%)	
Group Age > 70 yrs	114 (25%)	86 (31%)	28 (16%)	p=0.0003**
Gender, F/M, %-F	332/128 (F-72%)	193/88 (F-69%)	139/40 (F-78%)	p=0.043**
Educ0-1	63 (15%)	27 (11%)	36 (22%)	
Educ2-3	349 (85%)	222 (89%)	127 (78%)	p=0.003**
RA Disease duration yrs, mn	14,77 +/-0,51	15,24 +/-0,69	14,04 +/-0,73	
Smokers: YES/NO/ Ex-Smokers, %-YES	85/248/79 (21%) (17%)	42/156/52 (17%)	43/92/27 (27%)	p=0.018**
RF YES/NO, %	243/137 (64%)	133/94 (59%)	110/43 (72%)	p=0.009**
ACPA YES/NO, %	244/132 (65%)	127/93 (58%)	117/39 (75%)	p=0.001**
HAQ, mn	0,814+/-0,039	0,797+/-0,051	0,838+/-0,061	
DAS28-CRP, mn	2,39+/-0,05	2,35+/-0,07	2,44+/-0,09	
GC, YES/NO, %	360/86 (19%)	217/55 (20%)	143/31 (18%)	
csDMARDs (MTX), YES/NO, %	124/322 (72%)	72/200 (74%)	52/122 (70%)	
BioDMARDs, NO/YES, %	151/295 (66%)	107/165 (61%)	44/130 (75%)	p=0.003**

(*) - Unpaired t Test; (**) - Fisher's exact test

Conclusion: In our RA cohort, the rates of willingness to receive the vaccine are promising. Dedicated education and outreach efforts should be developed, especially in some RA subpopulation.

Disclosure of Interests: None declared.

DOI: 10.1136/annrheumdis-2021-eular.1779

POS1197

IN DEPTH IDENTIFICATION OF RISK FACTORS FOR SEVERE COVID-19, REQUIRING HOSPITALIZATION, IN PATIENTS WITH INFLAMMATORY RHEUMATIC DISEASES: RESULTS OF A DUTCH NESTED CASE CONTROL STUDY (PRELIMINARY RESULTS)

M. Opdam¹, S. Benoy², L. M. Verhoeft¹, S. Van Bijnen³, F. Lamers-Karnebeek⁴, R. A. M. Traksel², P. Vos⁵, A. Den Broeder¹, J. Broen². ¹Sint Maartenskliniek, Rheumatology, Ubbbergen, Netherlands; ²Regional Rheumatology Center, Máxima Medical Center, Rheumatology, Eindhoven, Netherlands; ³Elisabeth-TweeSteden Hospital, Rheumatology, Tilburg, Netherlands; ⁴Bernhoven, Rheumatology, Uden, Netherlands; ⁵Amphia Hospital, Rheumatology, Breda, Netherlands

Background: Several risk factors for severe COVID-19 have been identified¹. An important question is whether in addition to these generic risk factors, patients with a potentially altered immune response, either by disease (inflammatory rheumatic diseases (IRDs)) or use of immunomodulatory agents (IA), carry a higher or lower risk of severe COVID-19. In addition, several other potential risk factors for severe COVID-19 have been suggested, such as vitamin D status and specific medication (NSAIDs, ACE-inhibitors)².