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Background: The COVID-19 pandemic has impacted the wellbeing of patients with Rheumatic and Musculoskeletal Diseases (RMDs).

Objectives: The aim is to assess emotional well-being and its associated factors in patients with RMDs during the first wave of the COVID-19 pandemic.

Methods: REUMAVID is an international collaboration led by the Health & Territory Research group at the University of Seville, together with a multidisciplinary team including patient organisations and rheumatologists. This cross-sectional study consisting of an online survey gathering data from patients with a diagnosis of 15 RMDs in Cyprus, France, Greece, Italy, Portugal, Spain, and the United Kingdom. 1,800 participants were recruited by patient organisations. Data was collected between April and July 2020. Participants were divided into two groups: 1) Participants with poor wellbeing (World Health Organization-Five Wellbeing Index (WHO-5) ≤ 50), 2) Participants with good wellbeing (WHO-5 >50). The Mann-Whitney and χ^2 tests were used to analyse possible relations between sociodemographic characteristics, lifestyle, and outdoor contact with wellbeing during the first wave of the COVID-19 pandemic. Univariate and multivariate binary logistic regression was used to determine the impact of the independent variables associated with poor wellbeing.

Results: 1,777 patients with 15 different RMDs were included. The mean age was 52.7, 80.2% female, 48.7% had a university degree, and 69.7% were married or in a relationship. The most frequent diagnoses were inflammatory arthritis (75.4%). 49.0% reported poor wellbeing. 57.7% of patients who belonged to a patient organisation reported good wellbeing (vs 46.3% who did not, $p<0.001$). Those who reported poor wellbeing had higher disease activity (51.4% vs 41.3%, $p<0.001$), a higher risk of anxiety (54.3% vs 41.7%, $p<0.001$) and depression (57.0% vs 42.1%, $p<0.001$), and poorer self-perceived health (53.0% vs 41.8%, $p<0.001$), compared to those who did not. A higher proportion of those who engaged in physical activity presented good wellbeing (54.0% vs 46.5%, $p=0.012$). 57.4% of the patients who were unable to attend their appointment with their rheumatologist reported poor wellbeing, compared to 48.2% who did attend ($p=0.027$). Patients who did not walk outside (56.2%) or who lacked elements in their home to facilitate outside contact (63.3%) experienced poor wellbeing ($p<0.001$). The factors associated with poor wellbeing were lack of elements in the home enabling contact with the outside world (OR=2.10), not belonging to a patient organisation (OR=1.51), risk of depression (OR=1.49), and not walking outside (OR=1.36) during the COVID-19 pandemic (Table 1).

Conclusion: Almost half of the patients with RMDs reported poor emotional wellbeing during the first wave of the COVID-19 pandemic. The lack of elements in the home that facilitate outdoor contact, not belonging to a patient organisation, the presence of anxiety, and not walking outside during the pandemic increase the probability of poor emotional well-being. These results highlight the importance of environmental factors and the role of patient organisations in addressing the effects of the pandemic and its containment measures.

Table 1. Logistic regression for poor wellbeing WHO-5 (N=1,104)

	Univariate logistic analysis		Multivariate logistic analysis	
	OR	95% CI1	OR	95% CI1
Patient organisation. Non-member	1.57	1.30, 1.89	1.51	1.18, 1.93
Disease activity (VAS ≥ 4)	1.50	1.21, 1.86	1.16	0.85, 1.56
Risk of anxiety (HADS, 0-21)	1.67	1.38, 2.02	1.20	0.92, 1.58
Risk of depression (HADS, 0-21)	1.83	1.51, 2.21	1.49	1.12, 1.99
Self-reported health. Fair to very bad	1.58	1.30, 1.91	1.26	0.94, 1.68
Change in health status. Worse	1.27	1.06, 1.53	1.05	0.80, 1.38
Physical activity. No	1.35	1.07, 1.71	1.08	0.83, 1.40
Talked with rheumatologist during the pandemic. No	1.45	1.04, 2.03	1.04	0.68, 1.61
Walk outside during COVID-19 pandemic. No	1.47	1.19, 1.83	1.36	1.02, 1.81
Element in home with outdoor contact. No	1.93	1.42, 2.62	2.10	1.41, 3.15

¹95% CI for test H_0 : OR = 1

Acknowledgements: This study was supported by Novartis Pharma AG. We would like to thank all patients that completed the survey as well as all of the patient organisations that participated in the REUMAVID study including: the

Cyprus League Against Rheumatism (CYPLAR) from Cyprus, the Association Française de Lutte Anti-Rhumatismale (AFLAR) from France, the Hellenic League Against Rheumatism (ELEANA) from Greece, the Associazione Nazionale Persone con Malattie Reumatiche e Rare (APMARR) from Italy, the Portuguese League Against Rheumatic Diseases (LPCCR), from Portugal, the Spanish Federation of Spondyloarthritis Associations (CEADE), the Spanish Patients' Forum (FEP), UNIMiD, Spanish Rheumatology League (LIRE), Andalusian Rheumatology League (LIRA), Catalonia Rheumatology League and Galician Rheumatology League from Spain, and the National Axial Spondyloarthritis Society (NASS), National Rheumatoid Arthritis (NRAS) and Arthritis Action from the United Kingdom.

Disclosure of Interests: Marco Garrido-Cumbrera: None declared, Helena Marzo-Ortega Speakers bureau: AbbVie, Biogen, Celgene, Janssen, Lilly, Novartis, Pfizer, Takeda and UCB., Consultant of: AbbVie, Celgene, Janssen, Lilly, Novartis, Pfizer and UCB, Laura Christen Employee of: Novartis Pharma AG, Loreto Carmona: None declared, José Correa-Fernández: None declared, Sergio Sanz-Gómez: None declared, Pedro Plazuelo-Ramos: None declared, LAURENT GRANGE: None declared, Dale Webb Grant/research support from: AbbVie, Biogen, Janssen, Lilly, Novartis and UCB., Shantel Irwin: None declared, Clare Jacklin Grant/research support from: has received grant funding from Abbvie, Amgen, Biogen, Eli Lilly, Gilead, Janssen, Pfizer, Roche, Sanofi & UCB, Souzi Makri Grant/research support from: Novartis, GSK and Bayer., Elsa Mateus Grant/research support from: Lilly Portugal, Sanofi, AbbVie, Novartis, Grünenthal S.A., MSD, Celgene, Medac, Janssen-Cilag, Pharmakern, GaIPA., Serena Mingolla: None declared, KATY ANTONOPOULOU: None declared, Victoria Navarro-Compán Grant/research support from: Abbvie, BMS, Janssen, Lilly, MSD, Novartis, Pfizer, Roche, and UCB.

DOI: 10.1136/annrheumdis-2021-eular.2396

POS1214

THE DYNAMICS OF INFLAMMATORY MARKERS IN COVID-19 PATIENTS TREATED WITH LEVILIMAB

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Background: Levilimab (LVL) is a novel anti-IL6R monoclonal antibody against IL6R α . Cytokine release syndrome plays the key role in the pathogenesis of a range of life-threatening conditions including the acute respiratory distress syndrome in severely ill COVID-19 patients. Thus, the use of LVL could be considered as anti-cytokine therapy with a potency to prevent the complications and progression of respiratory failure in COVID-19.

Objectives: We analyzed the changes in the serum concentrations of inflammatory markers (Erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), and IL-6) in patients treated with LVL or placebo as part of a phase III multicenter randomized double-blind placebo-controlled adaptive-design CORONA clinical study aimed to evaluate the efficacy and safety of LVL in subjects with severe COVID-19 (NCT04397562).

Methods: A total of 217 patients were enrolled in the study, 206 patients were randomized, and 204 patients received the investigational product (IP, LVL or placebo).

Study included men and non-pregnant women aged ≥ 18 years, hospitalized for severe COVID-19 pneumonia, receiving standard therapy according to the national guidelines. Patients with acute respiratory failure with the need in invasive respiratory support, septic shock, multiple organ failure or life expectancy