Results: Seventy-seven patients were included, 58 (75.3%) were females; the mean age was 54.24 $\pm$ 11.0 years and seropositivity was founded in 65 (84.4%) for anti-citrullinated protein antibodies and in 58 (75.3%) for rheumatoid factor. The first bDMARD most commonly prescribed were etanercept (28.6%) and rituximab (26%). Regarding the vitamin D status at baseline, the mean serum level for 25(OH)vitamin D was 28.35 $\pm$ 18.21 ng/mL, with the majority of patients having vitamin D insufficiency (25(OH)vitamin D < 30 ng/mL) (63.6%). After 6 months of treatment with the first bDMARD, disease activity measures showed that remission or low activity were achieved in 29.9% of the patients, using DAS28 criteria; in 42.9% and 46.8%, according CDAI and SDAI criteria, respectively. Vitamin D serum levels at 6 months were 26.81 $\pm$ 11.72, with the majority of patients still with vitamin D insufficiency (62.3%).

At baseline, patients with vitamin D insufficiency had greater patient VAS (79.00 $\pm$ 19.14 vs 71.71 $\pm$ 21.95), greater erythrocyte sedimentation rate (ESR) (40.67 $\pm$ 23.17 vs 32.46 $\pm$ 26.09) and greater Health Assessment Questionnaire (HAQ) score (1.75 $\pm$ 0.609 vs 1.61 $\pm$ 0.659) with neither of them having statistical significance. However, when comparing CRP levels at 6 months, it achieved statistical significance with the Mann-Whitney U-test (1.05 $\pm$ 1.79 vs 1.41 $\pm$ 5.22; $p=0.026$). The same tendency was confirmed when analyzing vitamin D levels at 6 months. Patients with vitamin D insufficiency presented greater patient VAS (55.33 $\pm$ 28.82 vs 42.86 $\pm$ 28.28), greater ESR (26.19 $\pm$ 21.57 vs 21.00 $\pm$ 20.38) and greater HAQ score (1.35 $\pm$ 0.662 vs 1.34 $\pm$ 0.705), although without statistical significance. However, it did achieve statistical significance when comparing baseline DAS28 and HAQ (5.60 $\pm$ 0.91 vs 5.38 $\pm$ 1.31; $p=0.013$ and 1.76 $\pm$ 0.53 vs 1.59 $\pm$ 0.75; $p=0.007$, respectively).

Conclusion: Our data failed to demonstrate a statistically significant association between vitamin D serum levels at baseline and at 6 months with disease activity in our RA sample. However, it revealed a positive trend of vitamin D insufficiency related to higher activity disease. Interestingly, it showed that vitamin D insufficiency after 6 months of bDMARD treatment is related to higher DAS28 and HAQ at baseline. Nonetheless, we insist it is of paramount importance to conduct larger studies to confirm these findings.

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POS0503

THE DISCORDANCE BETWEEN PATIENT-REPORTED AND CLINICAL/BIOLOGICAL OUTCOMES COULD HELP IN PREDICTING FUTURE DISEASE IMPACT IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Treatment of Rheumatoid Arthritis (RA) has improved significantly based on early treat-to-target (T2T) strategies. Still, decreased health related quality of life (QoL), restricted ability to work and other unmet needs are reported by RA patients even in the absence of disease activity. We previously identified 3 factors representing the broader impact of RA using exploratory factor analysis: a patient-reported factor (patients global health, pain, fatigue and HAQ), a clinical factor (physician's global health, tender and swollen joint count), and a laboratory factor (ESR and CRP)¹.

Objectives: To test whether the discordance between patient-reported (PRF) and clinical(CF)/laboratory(LF) measures can predict QoL, or has a mediating effect in predicting future disease burden based on disease activity (DAS28CRP).

Methods: This is a post-hoc analysis of the 2-year CareRA trial. PRF, CF and LF scores were calculated as weighted (by factor loading) sum of their components at week 16, 52 and 104 after treatment initiation. A discordance score (DS) between PRF and the mean of the other two scores was also computed.

Mediation analyses were fitted to test the hypothesis (Figure 1) that DS could be a mediator for predicting PRF, CF and LF at a future time point (week 16, 52 and 104) using DAS28CRP at a previous time point (baseline and week 16). Confidence intervals were estimated via 10 000 bootstraps. Finally, a linear regression was fitted for DS to predict future QoL (RAQoL questionnaire; range 0-30; higher values indicating worse QoL).

Results: Patients with early RA (n=379) were included with a mean (SD) age of 53.9 (13.0), 77% seropositive and 69% women.

The DS was shown to be mediating the effect of DAS28CRP on any future PRF (Table1). On the other hand, there was no mediation effect of the DS in the prediction of the CF and an inconsistent mediation effect when predicting the LF. Moreover, the DS at week 16 significantly predicted ($p<0.0001$) RAQoL scores at year 1 with an effect of β 19.05 (SE 1.58) and an R^2 of 0.30 (CI 0.22-0.38). Similarly, it predicted RAQoL ($p<0.0001$) at year 2 with a β 19.74 (SE 1.56) and R^2 of 0.32 (CI 0.24-0.40).

Figure 1: Postulated mediational path model

Table 1. Results of mediation analyses for prediction of future burden based on previous DAS28CRP and mediated by discordance.

Timepoint	Predictor variables	Direct Effect	95% CIs	R ²	Mediation effect
Patient-reported factor					
W16	DAS28CRP at BL	-0.0091	-0.0240, 0.0058	0.1450	Present
	DS at BL	0.0246*	0.0169, 0.0331	0.1784	
W52	DAS28CRP at W16	0.0215*	0.0010, 0.0419	0.3394	Partial
	DS at W16	0.0580*	0.0442, 0.0739	0.2749	
W104	DAS28CRP at W16	0.0101	-0.0102, 0.0305	0.2798	Present
	DS at W16	0.0528*	0.0396, 0.0686	0.2749	
Clinical factor					
W16	DAS28CRP at BL	0.0153*	0.0074, 0.0232	0.0599	Absent
	DS at BL	0.0019	-0.0010, 0.0048	0.1784	
W52	DAS28CRP at W16	0.0365*	0.0267, 0.0463	0.1944	Absent
	DS at W16	0.0034	-0.0031, 0.0095	0.2749	
W104	DAS28CRP at W16	0.0115*	0.0024, 0.0207	0.0409	Absent
	DS at W16	0.0033	-0.0019, 0.0089	0.2749	
Laboratory factor					
W16	DAS28CRP at BL	0.0063*	0.0015, 0.0111	0.0634	Partial
	DS at BL	0.0030*	0.0012, 0.0050	0.1784	
W52	DAS28CRP at W16	0.0003	-0.0063, 0.0068	0.0305	Present
	DS at W16	0.0051*	0.0012, 0.0096	0.2749	
W104	DAS28CRP at W16	-0.0007	-0.0079, 0.0064	0.0014	Absent
	DS at W16	0.0013	-0.0019, 0.0046	0.2749	

W: week BL: baseline DS: discordance score DAS28CRP: disease activity score in 28 joints with C-reactive protein* $p<0.01$

Conclusion: Early discordance between patient-reported and biological/clinical factors mediates the effect of disease activity on future patient-reported outcomes, but also predicts QoL. Paying attention to this early discordance might provide opportunities to prevent patient's unmet needs by additional non-pharmacological interventions, hence broadening the scope of T2T.

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POS0504

IS BIOELECTRICAL PHASE ANGLE ASSOCIATED WITH FUNCTIONAL STATUS AND DISEASE IMPACT IN PATIENTS WITH RHEUMATOID ARTHRITIS?

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