the concomitant type of vitamin D and pretreatment of osteoporosis for BMD change.

Results: BMD change at the lumbar spine, proximal femoral and femoral neck were 5.9% ($p<0.01$), 4.0% ($p<0.01$), and 1.2% ($p=0.36$) during one year. There were no differences in improvement ratio of BMD between each parameters (fig 1). Disease activity: 75 patients in remission or low disease activity and 65 patients in moderate or high disease activity were 6.4 vs 5.3% ($p=0.91$), 3.0 vs 5.1% ($p=0.73$), 2.0 vs 0.3% ($p=0.1$). bDMARDs: 45 patients with bDMARDs (anti-tumor necrosis factor inhibitors (TNF): 23, tocilizumab (TCZ): 13, abatacept (ABT): 7, Tofacitinib: 2) and 93 patients without bDMARDs were 6.0 vs 5.8% ($p=0.31$), 4.3 vs 4.1% ($p=0.57$), -0.2 vs 1.8% ($p=0.18$). Type of vitamin D: 47 patients taking active form vitamin D and 60 patients taking native form vitamin D were 5.5 vs 6.8% ($p=0.82$), 3.1 vs 3.8% ($p=0.93$), 0.4 vs 1.9% ($p=0.14$). Pretreatment of osteoporosis: 74 patients with pretreatment of osteoporosis (bisphosphonate:58, teriparatide:16) and 66 patients without pretreatment of osteoporosis were 6.9 vs 5.4% ($p=0.41$), 0.9 vs 4.0% ($p=0.22$), 2.0 vs 1.2% ($p=0.68$). Moreover, BMD change were not different in bDMARDs type, 5.0, 6.4, 0.5% in TNF group, 4.8, 0.7, -1.9% in TCZ group, 9.7, 4.9, 0.2% in ABT group (TNF vs TCZ: $p=0.83$, 0.98, 0.81, TNF vs ABT: $p=0.83$, 0.41, 0.97, TCZ vs ABT: $p=0.98$, 0.43, 0.9). There were no difference between bisphosphonate and teriparatide (6.2 vs 6.9%: $p=0.49$, 4.8 vs 0.9%: $p=0.35$, 0.9 vs 2.0%: $p=0.49$).

Conclusion: Denosumab improved BMD in patients with RA independently regardless of disease activity, bDMARDs, the concomitant type of vitamin D and pretreatment of osteoporosis.

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fig 1: BMD change.

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AB0236

DIFFERENCES AND DETERMINANTS OF PHYSICIAN'S AND PATIENT'S PERCEPTION IN GLOBAL ASSESSMENT OF RHEUMATOID ARTHRITIS

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Background: Patient's Global Assessment of Disease Activity (PtGA) and Physician's Global Assessment of Disease Activity (PhGA) are assessed as part of commonly used measures of disease activity in RA.¹ Both are important measures in treat-to-target strategies in Rheumatoid Arthritis (RA), but often provide discordant results.^{2,3} This can provide an erroneous assessment of disease activity in patients under Biologic treatment and mislead treatment decisions, namely switches.

Objectives: To assess differences and determinants of PtGA and PhGA in RA patients under biologic treatment.

Methods: Cross-sectional study, including 46 patients with RA diagnosed according to the ACR/EULAR criteria, under biologic treatment, consecutively evaluated in day-care unit. Participants completed patient-reported outcomes (PROs), including PtGA, and sociodemographic characteristics. Physicians collected comorbidities and parameters of inflammatory activity (erythrocyte sedimentation rate [ESR] and C-reactive protein [CRP]) and completed PhGA and disease activity score 28 with ESR (DAS28). SPSS was used for statistical analysis and significance level was defined as 2-sided $p<0.05$.

Results: Clinical and laboratory characteristics of patients are shown in table 1. PtGA and PhGA were significantly different (36.1 ± 27.6 mm vs 8.7 ± 14.2 mm, $p<0.001$) and a positive discordance (PtGA>PhGA, more than 25mm in visual analogue scale [VAS]) was found in 54.3% of cases.

PtGA had a correlation with PROs (Pain VAS, 36-Item Short Form Health Survey [SF-36], Health Assessment Questionnaire [HAQ], Functional Assessment of Chronic Illness Therapy [FACIT], EuroQol [EQ5D] and Hospital Anxiety and Depression Scale [HADS]), CRP, tender and swollen joint counts and an association with comorbidities like fibromyalgia or osteoarthritis (OA). No association was found between PtGA and age, sex, education level, profession, employment status, extra-articular manifestations, positivity of rheumatoid factor, ESR, years of disease evolution or number of biologic treatments. In multivariable analysis including SF-36, CRP, tender joints count and OA (R^2 adjusted= 0.672), the main predictors of PtGA were lower SF36, concomitant OA and higher CRP level.

PhGA had a correlation with PtGA, pain VAS, CRP, tender and swollen joints. No association was found between PhGA and patient or physician age, patient or physician sex, extra-articular manifestations, positivity of rheumatoid factor, ESR level, years of disease evolution or number of biologic treatments. In multivariable analysis including ESR, tender and swollen joints count and CRP (R^2 adjusted= .800), the main predictors of PhGA were swollen joint count and higher CRP level.

Conclusion: This study showed the variability implied on global assessment of RA activity. Overall PtGA is based on function and also in subjective and emotional experience of pain, whereas the PhGA is based on more objective measures, more related to disease activity.

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AB0237

ARE THERE DIFFERENCES IN CLINICAL PROFILE AND TREATMENT AMONG 2 DIFFERENT INTERCONTINENTAL COHORTS OF PATIENTS WITH RHEUMATOID ARTHRITIS-ASSOCIATED INTERSTITIAL LUNG DISEASE?

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Background: Rheumatoid Arthritis (RA) is characterized by persistent joint synovitis causing progressive destruction of the cartilage and bone. Interstitial lung disease (ILD) is a frequent extra-articular manifestation of RA. Clinical profiles of patients with RA-associated ILD may vary.

Objectives: To describe the clinical characteristics and radiological patterns and evaluate the different clinical profile between two different cohorts of patients (pts) with RA-associated ILD.

Methods: Retrospective cohort study. We collected clinical and epidemiological data of pts seen in outpatient clinic from a Hospital from Barcelona, Spain and another from Jacksonville, Florida, USA. Pts who met the RA ACR/EULAR 2010 criteria and the ILD American Thoracic Society /European Respiratory Society 2013 classification criteria were selected. The study was approved by both local committees.

Results: A total of 63 pts were included, 37 from Barcelona and 26 from Jacksonville. Forty-one pts (65%) were women with a median age of 68 years. General characteristics are summarized in Table. Thirty-eight pts (60.3%) were former smokers, but only 9 pts (14.3%) were current smokers. Fifty-two pts (82.5%) were Caucasian, 9.5% Mestizo, 3.2% Maghreb and 1.6% Indian. Most were overweight with mean BMI of 28.6 (SD 5.4). The Barcelona cohort showed more erosive disease than the pts from Jacksonville (26 vs 5 pts, $p=0.00$). Seven pts had ILD diagnosis before RA. 4.82 (range 0-33) years was the median evolution from RA diagnosis until ILD diagnosis. Most common type of ILD was usual interstitial pneumonia (UIP) in 40% of pts, followed by nonspecific interstitial pneumonia (NSIP) in 25% of pts. Respiratory bronchiolitis was significantly more common in Barcelona cohort, while unspecific pattern in Jacksonville cohort (Table). A total of 71.4% were under GC treatment, methotrexate was used in 23 pts (36.5%), leflunomide in 14 (22.2%) and hydroxychloroquine in 7 pts (11.1%) prior to diagnosis of ILD. 6 out of 26 pts from Jacksonville were under MMF. TNF- α inhibitors were the most commonly used bDMARD in both cohorts as a first-line option prior to ILD diagnosis. Currently, half of the patients (50.8%) were under bDMARD. Current use of bDMARD was more often in US cohort (80.7%) than in Barcelona cohort (29.7%). Rituximab (RTX) was the most common bDMARD currently used (17 pts). Jacksonville pts were more commonly treated with RTX, while Barcelona pts were more commonly treated with Abatacept.

Conclusion: Globally pts with RA-associated ILD have similar clinical profile in both centers, however, we found some differences in radiological patterns and treatment strategies between both cohorts. Those differences could be explained in part by sociodemographic differences, diagnostic and therapeutic approach and/or access for health care among others.

	Total n=63 %	Barcelona cohort n= 37	Jacksonville cohort n=26	P value
Caucasian, patients (%)	52 (82.5%)	31 (83.8)	21 (77.8)	0,49
Time RA evolution, mean years (SD)	10.58 (8.01)	11.63 (7)	9 (9.24)	0.80
Time ILD evolution, mean years (SD)	3.89 (3.20)	3.86 (3.28)	4 (3.12)	0.28
Erosive disease, patients (%)	31 (49.2)	26 (72.2)	5 (18.5)	0,00
Rheumatoid nodules, patients (%)	8 (12.7)	7 (18.9)	1 (3.8)	0,12
Current sDMARDs treatment, patients (%)	35 (55.55)	31 (49.20)	4 (6.34)	0,002
Current bDMARD treatment, patients (%)	32 (50.8%)	11 (17.5)	21 (33.3)	0,001
ILD type				
Usual interstitial pneumonia (UIP), patients (%)	25 (40.3)	14 (37.8)	11 (44)	0,08
Nonspecific interstitial pneumonia (NSIP), patients (%)	16 (25.8)	14 (37.8)	2 (8)	0,23
Respiratory bronchiolitis–interstitial lung disease (RB), patients (%)	7 (11.3)	7 (18.9)	0	0,039
Cryptogenic organizing pneumonia (OP), patients (%)	4 (6.5)	2 (5.4)	2 (8)	0,43
Unspecific, patients (%)	8 (12.9)	0	8 (32)	0,004

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AB0238

SERUM LEVELS OF E-SELECTIN AND IL-8 DECREASE AFTER 6 MONTHS OF ANTI-INFLAMMATORY THERAPY AND MIRROR FAVORABLE VASCULAR CHANGES IN RHEUMATOID ARTHRITIS

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Background: Accelerated atherosclerosis is a systemic manifestation of rheumatoid arthritis (RA). E-selectin, VCAM-1, MCP1/CCL2 and IL-8/CXCL8 are

involved in leukocyte migration through endothelial cells in both atherosclerosis and RA [1]. Therefore, these endothelial function markers might reflect endothelial function and systemic inflammation in RA. If so, such a marker could be used to assess cardiovascular risk in RA patients.

Objectives: The aim of this study was to investigate the effect of 6 months of anti-inflammatory treatment on RA serum levels of endothelial function markers and whether these serum levels are related to prognostic imaging markers for atherosclerosis.

Methods: E-selectin, VCAM-1, MCP1 and IL-8 serum levels were determined at baseline and after 6 months of therapy with MTX monotherapy or in combination with adalimumab for 40 RA patients and 19 osteoarthritis (OA) controls using commercial ELISA kits. Prognostic imaging markers for atherosclerosis were pulse wave velocity (PWV) and augmentation index (AIx) as measured with SphygmoCor tonometry. Parametric analyses were used for E-selectin, VCAM-1 and MCP1 and non-parametric or parametric analyses after log transformation for IL-8.

Results: Baseline VCAM-1 and IL-8 were significantly higher for RA patients than OA controls with and without adjustment for age and sex or traditional risk factors (table 1).

Table 1. Comparison between RA and OA serum levels of endothelial function markers at baseline

	OA	RA	Crude analysis		Adjusted age sex		Adjusted traditional risk factors*	
	Mean $\pm$ SD or median (IQR)	Mean $\pm$ SD or median (IQR)	Difference OA and RA (95%CI)	p	Difference OA and RA (95%CI)	p	Difference OA and RA (95%CI)	P
E-selectin (ng/ml)	29 $\pm$ 15	32 $\pm$ 17	3 (-6-12)	0.49	3 (-6-12)	0.53	3 (-7-13)	0.54
VCAM-1 (ng/ml)	786 $\pm$ 102	897 $\pm$ 200	110 (13-208)	0.03	103 (4-202)	0.04	110 (2-218)	0.05
MCP1 (pg/ml)	248 $\pm$ 248	316 $\pm$ 165	68 (-15-150)	0.11	71 (-10-152)	0.09	49 (-41-138)	0.28
IL-8 (pg/ml)	15 (10-25)	37 (17-117)	n/a	0.01	n/a	0.01	n/a	0.02

* Age, hypertension, bmi and pack years

After 6 months of anti-inflammatory therapy, E-selectin and IL-8 serum levels significantly decreased (table 2). This decrease was especially present in the RA patients with good EULAR-DAS28 response to the medication and not in patients with no/moderate response (E-selectin: -7, 95%CI -13- -2, $p=0.007$ versus -0.1, 95%CI -3-2, $p=0.925$; IL-8: -2, $p=0.033$ versus -1, $p=0.267$).

Table 2. Endothelial function markers difference after 6 months of therapy in RA patients

	Difference (95%CI)	p-value
E-selectin (ng/ml)	-4 (-7-1)	0.010
VCAM-1 (ng/ml)	+10 (-56-77)	0.753
MCP1 (pg/ml)	-14 (-34-62)	0.557
IL-8 (pg/ml)	-11 (n/a)	0.014

Furthermore, in the RA patients we found a significant correlation between the difference in PWV after 6 months and the difference in E-selectin (Pearson $r=0.450$, $p=0.018$) and IL-8 (Spearman $r=0.401$, $p=0.038$). All other possible correlations of the endothelial function markers with PWV and AIx were not significant (data not shown).

Conclusion: Serum levels of E-selectin and IL-8 decreased after 6 months of anti-inflammatory therapy, and both correlated with the PWV changes. This is the first study investigating both serologic as well as imaging markers of endothelial function and atherosclerosis in RA patients undergoing anti-inflammatory therapy. Our study suggests that E-selectin and IL-8 circulatory levels may reflect the best both systemic inflammation as well as endothelial function in RA, and might be therefore useful in the future as markers of cardiovascular risk in these patients.

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