Table 1. Demographic characteristics of the two groups

	CDAI-R	CDAI-F	p-value
cases	594	313	
sex	430 (72.4%)	313 (80.2%)	5.7×10^{-2}
age at onset	62.2	60.9	1.8×10^{-1}
age at FC	65.8	65.1	4.7×10^{-1}
ACPA at FC	209.3 (83.9%)	227.9 (86.7%)	7.2×10^{-2}
RF at FC	83.8 (92.2%)	92.3 (86.1%)	5.6×10^{-2}
SHS at FC	41.9	66.9	6.0×10^{-5}
CDAI at FC	10.7	11.1	5.5×10^{-2}
CRP at FC	1.3	1.6	1.2×10^{-1}
mHAQ at FC	0.439	0.475	3.2×10^{-1}
PS-VAS at FC	32.6	34.9	2.1×10^{-1}
time span	3.7	4.5	6.4×10^{-4}

Abbreviations: FC, first consultation; ACPA, anti-cyclic citrullinated polypeptide-antibodies; RF, rheumatoid factor; SHS, Sharp/van der Heijde Score; CDAI, clinical disease activity index; CRP, C-reactive protein; mHAQ, modified Health Assessment Questionnaire; PS-VAS, pain score with visual analog scale; time span, time span from FC to date first CDAI remission attained.

Disclosure of Interests: None declared

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AB0233 ATTAINING CDAI REMISSION IS THE FIRST GATEWAY TO ATTAIN BOOLEAN REMISSION

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Background: Boolean remission is most stringent but most comparable remission status for the patient with rheumatoid arthritis (RA). Clinical remission evaluated with clinical disease activity index (CDAI) is also one of the most popular index for evaluation of RA treatment. These two criteria often overlap, but some are split.

Objectives: Clinical significance of attaining CDAI remission before attaining Boolean remission was investigated.

Methods: Patient with RA were treated in the institute since August 2010 under treat to target (T2T) strategy. In accordance with T2T, RA patients were monitored from the first consultation with parameter such as tenderness joint count (TJC), swollen joint count (SJC), patient's global assessment (PGA), evaluator's global assessment (EGA), C-reactive protein (CRP), modified Health Assessment Questionnaire (mHAQ), pain scale with visual analog scale (PS-VAS), and EuroQOL 5-dimension (EQ-5D). CDAI and Boolean are also evaluated at the same time. Radiographs of bilateral hands and feet are taken once a year from the first consultation, and the Sharp/van der Heijde Score (SHS) is measured.

In patients, a group who attained CDAI remission prior to attaining Boolean remission (CDAI-R), a group who could not attain CDAI remission previously than attaining Boolean remission (CDAI-F), and a group who could not attain Boolean remission despite attaining CDAI remission (Boolean-F) were picked up and divided according to change of disease activity. Among these three groups, mean age, sex, education level, job style, anti-cyclic citrullinated polypeptide antibodies (ACPA), rheumatoid factor (RF), the CDAI score, the HAQ score, PS-VAS and quality of life index (QOL) calculated from EQ-5D were compared with each other using Mann-Whitney U-test. Boolean remission attaining rate whether CDAI remission attained was compared with chi square test.

Results: Patient group configured with 255 of CDAI-R, 160 of CDAI-F, and 28 of Boolean-F. Patient who could not attain none of CDAI nor Boolean remission counted 175. In background factors at baseline, mean age, the HAQ score, and SHS of the Boolean-F were significantly older than the other groups. In the two groups of CDAI-R and CDAI-F, 28-joints disease activity score with C-reactive protein (DAS28-CRP), CDAI and PS-VAS in the CDAI-R were significantly lower than in the CDAI-F, similarly, DAS28-CRP, the CDAI score, the HAQ score, PS-VAS and QOL after Boolean remission attain were significantly higher in the CDAI-F than the CDAI-R. Sensitivity of Boolean remission when attaining CDAI remission previously before Boolean remission is 93.4%, and specificity was 52.2% ($p < 1.0 \times 10^{-30}$).

Conclusion: Attaining CDAI remission previously is extremely important, both for attaining Boolean remission and more stable clinical course after attaining Boolean remission. CDAI remission could be the first gateway to send sustainable QOL course.

Disclosure of Interests: None declared

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13. Rheumatoid arthritis - comorbidity and clinical aspects

AB0234 ASSOCIATION OF HOMOCYSTEINE LEVEL AND CAROTID INTIMA-MEDIA THICKNESS IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Homocysteine (Hcy) has been implicated in atherogenesis. High homocysteine level can predict cardiovascular events, including death. Atherosclerosis has a high incidence in patients with Rheumatoid Arthritis (RA).

Objectives: The aim of this study is to evaluate the relationship between serum homocysteine levels and carotid atherosclerosis in patients with RA and anti-TNF therapy.

Methods: Our study included 80 RA patients divided into two groups: 45 patients were with anti-TNF-alpha therapy (Adalimumab, Infliximab, Etanercept) and 35 RA patients with disease-modifying antirheumatic drugs (DMARDs). The patients were diagnosed with RA used ACR/EULAR 2010 Classification Criteria. We measured carotid intima-media thickness (CIMT) using high-resolution Doppler ultrasonography at baseline and then at 12 months. CIMT above 0.9mm is an atherosclerosis marker. We considered high levels of homocysteine in the serum above 15 µmol/L. All patients had treatment with hypolipemiant drugs and antiplatelet agents during the 12 months. Other parameters were analyzed at baseline and after 12 months: age, lipid profile (HDL, LDL, and cholesterol), ESR and disease activity score (DAS28<2.6 means remission; DAS28=2.6-3.2 means low disease activity, DAS28=3.2-5.1 means moderate disease activity; DAS28>5.1 high disease activity).

Results: 45 patients received anti-TNF-alpha therapy (mean age 45.50±9.69 years) and 35 RA patients had treatment with DMARDs (mean age 48.3±8.9 years). High Hcy levels were found on 34% patients in DMARDs group and 21% patients in anti-TNF group. After 12 months of treatment, patients with high levels of Hcy and anti-TNF therapy had a significant decrease in CIMT. In patients with low Hcy level the decrease in CIMT was insignificantly statistic. In DMARDs group atherosclerotic plaque was detected to 26 patients (74.29%) and 21 (46.66%) patients were detected into anti-TNF group. After 12 months CIMT was significantly higher in DMARDs group and the difference was statistically significant compared to baseline and to anti-TNF group ($p=0.0002$). High DAS28 score was associated with increased CIMT and hyperhomocysteinemia in both groups ($p=0.0001$).

Conclusion: Increased Hcy levels were associated with increased CIMT values in both groups. In RA patients with anti-TNF therapy and high Hcy levels, reduction of CIMT was statistically higher than in patients with DMARDs treatment.

Disclosure of Interests: None declared

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AB0235 DENOSUMAB INCREASE THE BONE MINERAL DENSITY REGARDLESS OF DISEASE ACTIVITY, THE BIOLOGICAL DISEASE-MODIFYING ANTIRHEUMATIC DRUGS, THE CONCOMITANT TYPE OF VITAMIN D, AND PRETREATMENT OF OSTEOPOROSIS IN PATIENTS WITH RHEUMATOID ARTHRITIS.

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Background: Osteoporosis is one of the major comorbidities in patients with rheumatoid arthritis (RA). There are a lot of evidence that denosumab increase bone mineral density (BMD) in patients with osteoporosis. However, there are few reports investigated the influence of denosumab in patients with RA.

Objectives: We evaluated the BMD change in patients with RA treated denosumab and assessed the effect of various factors, such as disease activity, biological disease-modifying anti-rheumatic drugs (bDMARDs) use, concomitant medications of osteoporosis and pretreatment of osteoporosis.

Methods: This study included 140 consecutive RA patients (135 female, mean age was 70.6 ± 8.6 years) who fulfilled the criteria of osteoporosis and treated with denosumab. BMD at the lumbar spine, proximal femoral and femoral neck were evaluated by dual energy X-ray absorptiometry at baseline and one year after treatment. We evaluated the influence of disease activity, bDMARDs use,

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.