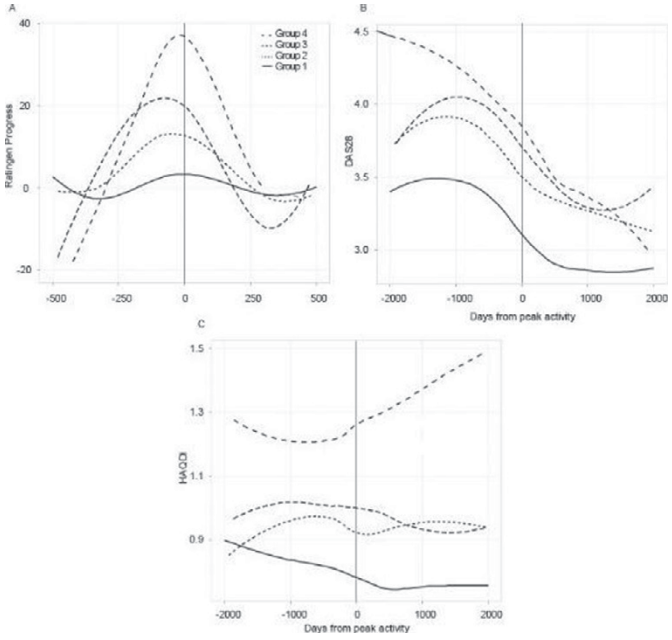
AB0273 VERY HIGH, BUT NOT LOWER, RADIOGRAPHIC PROGRESSION LEADS TO AN INCREASE IN HAQ-DI. RESULTS FROM THE SWISS SCQM RA COHORT

R. Mueller[1], R. Thalmann[1], N. Graf[2], H. Schulze-Koops[3], J. von Kempis[1].
[1]Division of Rheumatology, Kantonsspital St. Gallen, St. Gallen; [2]Graf Biostatistics, Winterthurthur, Switzerland; [3]Rheumaeinheit, Klinikum der Universität München, Campus Innenstadt, Munich, Germany

Background: Numerous predictors of radiographic progression in RA patients have been identified over the last years. In general, analyses of radiographic progression in RA rather focus on radiographic non-progression or repair. High radiographic progression in spite of therapy has, to our knowledge not been analysed in detail in the last years, neither in RCTs nor in cohort studies.
Objectives: To analyse radiographic, demographical and clinical data in RA patients with high radiographic progression before and after the individual peak radiographic progression.
Methods: We included all RA patients from the Swiss registry SCQM with at least two subsequently scored radiographs. Radiographic destruction was scored using the Ratingen erosion score. To analyse high radiographic progression we selected for the highest (peak) radiographic progression in every individual patient for the analysis. The individual peak radiographic progression was analysed in groups as change of Ratingen scores/year: 0-≤10, 10-≤20, 20-≤30, >30 (groups 1–4, follow up 1998 – 2015). The baseline disease characteristics were compared using standard descriptive statistics (Kruskal-Wallis or Chi-square tests). The change of DAS 28 and HAQ-DI scores before and after peak progression was analysed with the Wilcoxon signed rank tests.
Results: 3 patients were included into the analysis. 3'049 patients had a peak radiographic progression between 0 and ≤10/year, 773 between 10 and ≤20, 150 between 20 and ≤30, and 61 of >30. All patient groups were within the same age range (mean: 56.5 – 60.5 years). Rheumatoid factor and ACPA were more frequent in patient groups with higher peak radiographic progression (RF: 73.6, 80.0, 88.9, 90.0; ACPA: 66.8, 73.4, 74.3, 82.1, groups 1–4, respectively). When the rate of radiographic progression before and after peak progression was analysed, 69.7%, 74.7%, 76.9%, and 93.3% of the patients had a radiographic progression of 25% or lower as compared to peak progression before and 76.1%, 81.8%, 91.1%, and 93.8% after this peak progression, respectively for patients in groups 1 to 4 (Figure A).
The disease activity, as assessed by DAS 28, was significantly higher in all patient groups before peak progression and lower thereafter (Figure B, p<0.001). Average HAQ-DI scores increased after peak radiographic progression in group 4 (Figure C, p=0.005) whereas it is stable or even decreases among the patients of the other patient groups.



Conclusions: These data show that higher disease activity precedes radiographic peak progression, which is, if high, overall rare. Radiographic progression before and after the individual peak radiographic progression was far lower as compared to the time of radiographic peak progression. Only the highest individual peak (change of Ratingen score >30/year) radiographic progression was followed by an increase of HAQ-DI scores.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.4253

AB0274 THE ASSOCIATION BETWEEN REPEATEDLY INFECTION AND DISEASE OUTCOME IN PATIENTS WITH RHEUMATOID ARTHRITIS

R. Zhang[1], J. He[2], C. Li[2], J. Li[2], J. Chen[2], Y. Jin[2], Y. Gan[2], Z. Li[2].
[1]Department of Rheumatology and Immunology; [2]Peking University People's Hospital, Beijing, China

Background: Some publications shows some therapies in rheumatoid arthritis (RA) could cause infections and it also can react the disease prognosis. But there was no report about the relationship between the repeated infections during the disease duration and its outcome.
Objectives: Our study was to evaluate the association between the history of repeated infectious agents that occurred more than three times during the duration of RA and the current disease status of RA, such as disease activity and physical disability.
Methods: 688 pure RA patients were selected from December 2015 to June 2016 in Peking People's hospital and divided into two groups according to their current disease status. Clinical data were collected including DAS28, HAQ, disease duration and therapies. Infectious agents occurred repeatedly during the duration were identified as history repeated infectious agents. T test, ANOVA, chi-squared test and multivariate analysis of covariance were used for analyzing the association between the infections and disease outcome.
Results: 688 RA patients were divided into two groups based on whether their DAS28 reached 3.2 (active or inactive). The HAQ score and the incidence of airway infection has a significant difference among these two groups (P=0.000; P=0.002). Logistic regression analysis shows that smoking, airway infection and age were the risk factor for RA activite (OR=4.844, 95% CI (0.193,1.001); OR=1.326, 95% CI (0.655,2.687); OR=1.013, 95% CI (0.989,1.037)), and the disease duration and the therapy were also effect the disease outcome (OR=0.650;OR=1.560). Than we divided these patients into four groups based on their infectious site such as airway, urinary, intestinal and no-infection. After adjusting for the disease duration, only airway infection incidence has statistically significantly different (P=0.000). DAS 28 has statistical different only among the groups whether they have airway infectious agents after adjusting the smoking and therapy (P=0.002; P=0.002). Compared with infection free group, patients with airway infection has a higher DAS28 because they have more swollen or painful joints, while patients with urinary infection perform a higher scores because they have a high level of ESR.

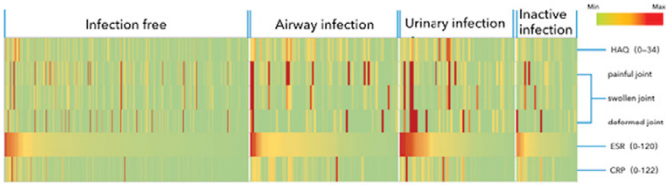


Figure 1. Levels of clinical data include HAQ, abnormal joints number,ESR and CRP were compared among subgroups of infection free(n=469), airway(n=121), urinary(n=75) and inactive infection(n=81).This figure shows which factor contribute to the difference of disease activity between subgroups.

Conclusions: The repeated infectious agents during the disease duration might lead to poor outcome. We should pay more attention to those patients who have repeatedly infectious agents during their disease duration in order to improve their prognosis.
References:
[1] Sokolove J, Wagner CA, Lahey LJ, et al. Increased inflammation and disease activity among current cigarette smokers with rheumatoid arthritis: a cross-sectional analysis of US veterans. Rheumatology (Oxford). 2016;55(11):1969–77.
[1] Sokolove J, Wagner CA, Lahey LJ, et al. Increased inflammation and disease activity among current cigarette smokers with rheumatoid arthritis: a cross-sectional analysis of US veterans. Rheumatology (Oxford). 2016;55(11):1969–77.
[2] Iguchi-Hashimoto M, Hashimoto M, Fujii T, et al. The association between serious infection and disease outcome in patients with rheumatoid arthritis. Clin Rheumatol. 2016;35(1):213–8.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.3976

AB0275 THE CORRELATION OF CARTILAGE OLIGOMERIC MATRIX PROTEIN WITH SONOGRAPHIC KNEE CARTILAGE THICKNESS AND DISEASE CHARACTERISTICS IN RHEUMATOID ARTHRITIS

S. Rajalingham[1], S. Rajalingam[2], H. Hussein[2], R. Sridharan[3], A.A. Wahab[4].
[1]Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur; [2]Medicine, Putrajaya Hospital, Putrajaya; [3]Radiology; [4]Microbiology, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

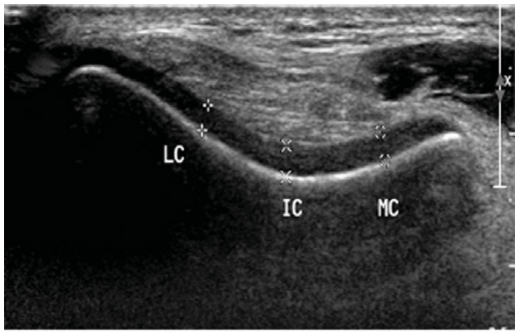
Background: Cartilage Oligomeric Matrix Protein (COMP) is an extracellular protein which is primarily found in the cartilage and to a lesser extent in ligaments, meniscus, tendons and synovium. Experimental models of rheumatoid arthritis (RA) and osteoarthritis have pointed out that serum COMP levels are reflective of the cartilage turnover rate.

Objectives: To investigate the correlation of serum COMP levels with the articular cartilage damage based on sonographic knee cartilage thickness (KCT) and disease characteristics in RA.
Methods: A total of 61 RA patients and 27 healthy controls were recruited in this study. Serum samples were obtained from all subjects to determine the COMP levels. All subjects had bilateral ultrasound scan of their knees performed by a single radiologist; who was blinded to the details of the subjects. The KCT was based on the mean of measurements at 3 sites; the medial condyle, lateral condyle and intercondylar notch (Figure 1). Besides, the RA patients were assessed for their disease activity based on DAS 28.
Results: Serum COMP concentrations were significantly elevated in the RA patients compared to the controls (p=0.001). The serum COMP levels had an inverse relationship with bilateral KCT in RA subjects and the healthy controls. However, the association was statistically insignificant for bilateral knees in the control arm. COMP correlated significantly with disease activity based on DAS 28 (r =0.299, p=0.010), disease duration (r =0.439,p = <0.05) and mean left KCT (r = -0.285,p=0.014) in RA (Table 1). Erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) which are the traditional markers of inflammation; demonstrated a significant positive correlation with the DAS 28 scores (r =0.372, p=0.003 for ESR; r =0.305, p=0.017 for CRP) comparable to the serum COMP. However, neither ESR nor CRP had a significant association with the KCT, as opposed to the serum COMP.

Table 1. Correlation of Serum COMP levels with Clinical Parameters in RA

Parameter	r	p value
Age	0.214	0.094
BMI	0.122	0.259
DAS 28	0.299	0.010
ESR	0.065	0.311
CRP	0.027	0.418
Disease duration	0.439	<0.05
Mean Right KCT	-0.177	0.088
Mean Left KCT	-0.285	0.014

KCT: knee cartilage thickness.



LC: Lateral Condyle, MC : Medial Condyle, IC :Intercondylar notch

Figure 1 : Sites of sonographic knee cartilage thickness measurement

Conclusions: The serum COMP is a promising biomarker in RA which reflects disease activity and damage to the articular cartilage. Serum COMP appeared superior to the traditional markers in RA i.e ESR and CRP in predicting sonographic KCT.
References:
[1] Andersson ML, Svensson B, Petersson IF, et al. Early increase in serum-COMP is associated with joint damage progression over the first five years in patients with rheumatoid arthritis. BMC Musculoskelet Disord. 2013;14:229.
[2] Happonen KE, Saxne T, Aspberg A, et al. Regulation of complement by cartilage oligomeric matrix protein allows for a novel molecular diagnostic principle in rheumatoid arthritis. Arthritis Rheum. 2010;62:3574–83.
[3] Happonen KE, Saxne T, Geborek P, et al. Serum COMP-C3b complexes in rheumatic diseases and relation to anti-TNF-alpha treatment. Arthritis Res Ther. 2012;14:R15.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.1213

AB0276 EVALUATION OF ADHERENCE TO DRUG TREATMENT IN PATIENTS WITH RHEUMATOID ARTHRITIS

A.E.-A.M. Alhefny[1], S.A. Mobasher[2], M.A. Abd El-Rahman[1], N.H. Shedid[1], H.M. Sakr[3], R.M. Hassan[1]. *[1]Ain Shams University Hospitals, Cairo, Egypt; [2]Internal Medicine and Rheumatology; [3]Radiology, Ain Shams University Hospitals, Cairo, Egypt*

Background: the medication adherence is very vital issue nowadays, especially in RA patients.
Objectives: to measure the frequency of the adherence in RA patients, and evaluate the common factors influencing RA patients adherence to drug treatment aiming at improving disease outcome.
Methods: a Prospective cohort study of 100 patients with RA under treatment, fulfilled the American College of Rheumatology/European League Against Rheumatism (ACR/ EULAR) (1) criteria. All patients subjected to Full history taking and clinical examination, (DAS 28 ESR), Health Assesment Questionnaire (HAQ) score, Visual Analouge Scalez (VAS) scale, CBC, ESR, CRP titer, RF titer, ACPA titer and Power Doppler U/S for both hands, patients also respond to specific questionnair containing questions about sociodemographic data, medication, health care system and Compliance Questionnaire of Rheumaology (CQR).
Results: The baseline adherence rate (CQR≥80) was 37%. The nonadherent RA patients to drug treatment were older, living outside Cairo, with low educational level and smokers, they also had higher DAS28ESR score, HAQscore, ESR, CRP titer and more frequent active synovitis in Doppler ultrasound. The cost of medication (61%), non-availability of medication in pharmacy (58%), forgetting the medication (36%), patients' lack of belief in the benefit of treatment (38%), inadequate follow up or discharge planning (23%) and polypharmacy (medication load) (20%) were the most common factors in nonadherent patients table (3). After 9 months of the follow up and trying to correct the causes of nonadherence, the adherence rate increased to (68.75%).Also there was improvement in disease activity, improvement in functional state and improvement in the quality of life.
Conclusions: Low adherence rate was associated with higher disease activity, functional disability. Patient education, financial support, good physician patient relationship, simplification of the prescription, facilitation their communication, using MSUS were found to improve the patient adherence and improve the disease outcome.
References:
[1] Aletaha D, Neogi T, Silman A et al, Rheumatoid arthritis classification criteria: an American College of Rheumatology/European League against Rheumatism collaborative initiative. Arthritis Rheum 2010:62:2569–2581.
[2] Dowman B, Campbell R, Zgaga L et al, Estimating the burden of rheumatoid arthritis in Africa: A systematic analysis. J Global Health 2012;2(2):1–9.
[3] Wasserman A, Diagnosis and Management of Rheumatoid Arthritis.American Family Physician J 2011:84(11):1245–1252.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.5785

AB0277 PATIENT REPORTED OUTCOMES EXPLAIN THE LACK OF AGREEMENT BETWEEN PHYSICIAN AND PATIENT PERCEIVED REMISSION IN EARLY RHEUMATOID ARTHRITIS

S.A. Turk[1], L. Rasch[2], W.F. Lems[1,2], L. van Tuyl[2], D. van Schaardenburg[1,3], M.M. ter Wee[2]. *[1]Amsterdam Rheumatology and Immunology Center| Reade; [2]Amsterdam Rheumatology and Immunology Center| VU University Medical Center; [3]Amsterdam Rheumatology and Immunology Center| Academical Medical Center, Amsterdam, Netherlands*

Background: Rheumatoid arthritis (RA) patients increasingly reach a state of absence of disease activity, or remission. However, the proportion of patients classified as in remission varies substantially between definitions and are often determined by disease activity score (DAS). But, the importance of patients' perspective is increasingly recognized, which often result in discordance between patients and physician assessment.
Objectives: To determine how often patients and physicians agree on a state of remission according to different definitions, as well as the difference in patient reported and clinical outcomes between patients in and not in self-perceived remission.
Methods: In 84 consecutive early RA patients, Boolean remission, EULAR

Table 1

Physician	Remission according to physician		
	PhR	NPhR	T
PatR	41 (61)	4 (23)	45 (54)
NPatR	26 (39)	13 (77)	39 (46)
T	67 (80)	17 (20)	84

Boolean	Remission			No remission		
	PhR	NPhR	T	PhR	NPhR	T
PatR	20 (87)	0 (0)	20 (87)	21 (48)	4 (24)	25 (41)
NPatR	3 (13)	0 (0)	3 (13)	23 (52)	13 (77)	36 (59)
T	23 (100)	0 (0)	23	44 (72)	17 (28)	61

EULAR response	Good			Moderate			None		
	PhR	NPhR	T	PhR	NPhR	T	PhR	NPhR	T
PatR	39 (65)	3 (60)	42 (65)	1 (20)	1 (14)	2 (17)	1 (50)	0 (0)	1 (14)
NPatR	21 (35)	2 (40)	23 (35)	4 (80)	6 (86)	10 (83)	1 (50)	5 (100)	6 (86)
T	60 (92)	5 (8)	65	5 (42)	7 (58)	12	2 (29)	5 (71)	7

ACR	ACR 70			ACR 50 (not 70)			non (not 50)		
	PhR	NPhR	T	PhR	NPhR	T	PhR	NPhR	T
PatR	20 (87)	2 (100)	22 (88)	5 (56)	1 (100)	6 (60)	16 (46)	1 (7)	17 (35)
NPatR	3 (13)	0 (0)	3 (12)	4 (44)	0 (0)	4 (40)	19 (54)	13 (93)	32 (65)
T	23 (92)	2 (8)	25	9 (90)	1 (10)	10	35 (71)	14 (29)	49

Values are expressed as number (%). PhR = physician perceived remission, NPhR = no physician perceived remission, PatR = patient perceived remission, NPatR = no patient perceived remission, T = total.