(UH) peptide UH-RA.1, which have predictive value for an early response to therapy. Antibody reactivity to UH-RA.1 was found in 7%–10% of early RA patients. Presence of anti-UH-RA.1 antibodies in baseline samples from the Leiden Early Arthritis Clinic (EAC) cohort (n=600) appeared to be related to a better outcome as 37% of the antibody-positive group vs 21% of the antibody-negative group reached sustained DMARD-free remission (p=0.016) [1].

Objectives: Our aim is to test the relation between antibody reactivity against UH-RA.1 peptide and early disease remission in baseline RA samples from the CareRA cohort.

Methods: Using a custom peptide enzyme-linked immunosorbent assay, the presence of anti-UH-RA.1 antibodies was investigated in the well characterised CareRA cohort [2]. Cut-off for seropositivity was defined by 2 × SD above the mean antibody level of the healthy control group [1]. In the CareRA trial, different treatment regimens consisting of synthetic DMARDs combined with a step down glucocorticoid treatment, were studied. We used 223 baseline RA samples, collected before the start of treatment and early disease remission was defined as a DAS28 (CRP) <2.6 at week 16.

Results: Antibodies to UH-RA.1 were found in 5% of the baseline samples from the CareRA cohort. Presence of anti-UH-RA.1 antibodies did not seem to be related to early disease remission in the CareRA cohort. Of the antibody positive group, 9/11 (82%) were in remission at week 16, while 152/212 (72%) of the antibody negative group reached early disease remission (p=0.37). However, in UH-RA.1 seropositive patients from the CareRA cohort, antibody levels were found to be significantly higher in baseline samples of patients that reached remission in week 16 (mean rank 120,51 vs 89,9, p=0.001).

Conclusions: In RA patients, presence of antibodies against UH-RA.1 peptide at baseline is related to sustained DMARD-free remission and high levels of antibodies against UH-RA.1 were correlated with early remission after combination therapy consisting of classical synthetic DMARDs with a step down glucocorticoid treatment. In combination with other predictive markers, antibodies against UH-RA.1 peptide might therefore contribute to an improved early patient stratification and prediction of therapy response.

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AB0293 FREQUENCY OF JOINT EROSIONS IN PATIENTS WITH RHEUMATOID ARTHRITIS, TREATED WITH BIOLOGICS IN RELATION TO RF AND ACPA SEROLOGY IN REAL LIFE

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Background: Rheumatoid arthritis (RA) is a chronic auto-immune disease, characterised by a symmetric polysynovitis and extra-articular manifestations. In 70% to 80% of patients with RA, serologic factors like Rheumatoid Factor (RF) and Anti-Citrullinated Protein Antibodies (ACPA) are present. Early recognition and treatment with disease-modifying antirheumatic drugs (DMARDs) is important in achieving control of disease and prevention of joint destruction. If it is untreated or unresponsive to therapy, inflammation destroys cartilage and bone, resulting in irreversible bone erosions. The 2016 EULAR recommendations for the management of RA stipulate that MTX is recommended as first-line strategy plus short-term GC, aiming at >50% improvement within 3 and target attainment within 6 months. If this fails, stratification is recommended. Without unfavourable prognostic markers, switching to, or adding another csDMARDs (plus short-term GC) is suggested. In the presence of unfavourable prognostic markers (autoantibodies, high disease activity, early erosions, failure of 2 csDMARDs), any bDMARD or Jak-inhibitor should be added to the csDMARD.

Objectives: To determine an association between serology status and prevalence of radiographic erosions, the use of biologics and prevalence of erosions, and serology status and use of biologics.

Methods: Data were obtained from the electronic patient files of patients who visited the department of Rheumatology at the University Hospital of Ghent (Belgium) between October and December 2016. Patient characteristics with respect to diagnosis, treatment, serology status and erosion status were collected. The data has been statistically analysed using χ^2;-, Fisher's exact, Kolmogorov-Smirnov en Kruskal-Wallis tests with α=0,05.

Results: A total of 2001 consultations were analysed, of which 358 patients were identified with RA. 353 patients were included, of which 116 men (32,9%) and 237 women (67,1%). The mean age of the study population was 62 years with a mean age of 52 years at diagnosis. Of these patients, 36,0%, 49,5% and 29,8% were positive for respectively RF, ACPA and RF +ACPA. 38% has ever been treated with a biologic, whereas 26,9% is currently treated with a biologic. 37,4% of the patients showed erosions on a recent radiograph of hands or feet. A positive ACPA serology (p<0,0001. OR=1,87), a positive RF serology (p=0010. OR=2,26) and a positive RF +ACPA serology (p=0007. OR=2,74) was more observed in patients with radiographic erosions. A significant difference in erosions was seen between patients treated with or without biologicals (p<0,0001. OR=3,45). Biologicals were prescribed more in patients with positive ACPA serology (p<0,0001. OR=3,92) and in patients with positive RF serology (p=0001. OR=2,67).

Conclusions: In a *consecutive* real life cohort of patients with RA, positive ACPA and/or RF status were associated with an increased risk to develop bone erosions in affected joints. Positive serology was also linked to biologic therapies. Patients who received biological treatment were more prone to have erosions.

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AB0294 TREATMENT MODES IN RHEUMATOID ARTHRITIS: FACTORS INFLUENCING PATIENT PREFERENCE

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Background: Little in-depth qualitative research has been conducted to investigate reasons for rheumatoid arthritis (RA) patient (pt) preferences for different modes of treatment administration. An understanding of pt preference can help physicians personalise therapy recommendations.

Objectives: To describe potential RA pt preferences for RA treatment modes and reasons for these preferences.

Methods: Pt demographic information was obtained at screening alongside qualitative interviews conducted using a semi-structured interview guide among adult RA pts in the US, UK, France, Germany, Italy, Spain, Switzerland and Brazil who were currently taking a DMARD (biologic or non-biologic). A 100-point allocation task was used to evaluate the strength of preference (0–100; 100=strong) across 4 treatment modes: oral (OR; once daily), self-injection (SI; weekly), clinic-injection (CI; weekly) and infusion (INF; monthly). Transcripts were developed in English; ATLAS.ti software (v7.5) was used for qualitative coding and analysis.

Results: 100 interviews (30 US; 10 in each of 7 other countries) were conducted (female: 75.0%; mean age: 53.9 years; mean time since diagnosis: 11.6 years). Current RA medication mode included OR (60.0%), injection (57.0%) and INF (14.0%); 79.0% and 37.0% of pts had experience with injection and INF medications, respectively; 31.0% of pts were taking a combination of biologic and non-biologic DMARDs. Among the 4 treatment modes, OR was allocated the highest mean (standard deviation [SD]) preference points (47.3 [33.1]) and the greatest percentage of pts with a 1st choice rank (57.0%); this was followed by SI (29.7 [27.7]; 29.0%), INF (15.4 [24.6]; 16.0%) and CI (7.5 [14.1]; 2.0%). Preferences by country suggested that the mean points allocated to OR were greater in the US vs other countries. Across all pts and treatment modes, 56.0% of pts had a 'strong' 1st choice preference (ie, a pt allocation ≥the mean pts across the 1st ranked choices [70]); of these pts, the majority chose OR (62.5%; SI: 23.2%; INF: 10.7%; CI: 3.6%). Speed of administration was among the most common reasons for choosing OR or SI as a 1st choice, together with ease of administration (OR) and frequency of dosing (SI; table 1). Difficulty remembering was the most common reason for not choosing OR and avoidance of pain was the most common reason for not choosing SI as a 1st choice.

Conclusions: More pts preferred OR as an RA treatment mode, followed by SI. Rationales for preference included ease of use, concerns about drug interactions, dosing frequency, feelings of control and avoidance of pain and needles. While 56.0% of pts felt strongly about their 1st choice preference, nearly half did not and may be receptive to and benefit from discussions with their healthcare professional and/or pt support groups about RA treatment mode options.

Abstract AB0294 – Table 1. Most frequent[a] reasons for choosing or not choosing each treatment mode as 1st choice

Reasons for choosing OR, n (%) (N=57)		**Reasons for not choosing OR, n (%) (N=43)**	
Speed of administration	30 (52.6)	Difficulty remembering	15 (34.9)
Ease of administration	30 (52.6)	Possible drug-drug interactions	11 (25.6)
Portability	23 (40.4)		
Reasons for choosing SI, n (%) (N=29)		**Reasons for not choosing SI, n (%) (N=71)**	
Speed of administration	16 (55.2)	Avoidance of pain due to needles	33 (46.5)
Frequency of dosing	12 (41.4)	Avoidance of needles	30 (42.3)
Having a feeling of control	11 (37.9)	Difficulties when traveling	19 (26.8)
		Need to refrigerate	18 (25.4)
Reasons for choosing CI,[b] n (%) (N=10)		**Reasons for not choosing CI,[c] n (%) (N=100)**	
Feels comfortable with experts administering	4 (40.0)	Need to go to the clinic	38 (38.0)
Prefers someone else to administer	3 (30.0)	Inconvenience	36 (36.0)
Reasons for choosing INF, n (%) (N=16)		**Reasons for not choosing INF, n (%) (N=84)**	
Frequency of dosing	13 (81.3)	Time-consuming	51 (60.7)
Feelings of safety and care	5 (31.3)	Hassle and inconvenience	28 (33.3)
		Need to go to the clinic	26 (31.0)

[a]Reported by ≥25% of patients; [b]N includes 2 patients who chose CI as clear 1st choice and 8 patients who chose CI as clear 2nd choice; [c]Based on total sample

CI, clinic-injection; INF, infusion; OR, oral; SI, self-injection

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AB0295 RISK FACTORS FOR PROGRESSION AND PROGNOSIS OF RHEUMATOID ARTHRITIS-ASSOCIATED INTERSTITIAL LUNG DISEASE: SINGLE CENTRE STUDY WITH A LARGE SAMPLE OF CHINESE POPULATION

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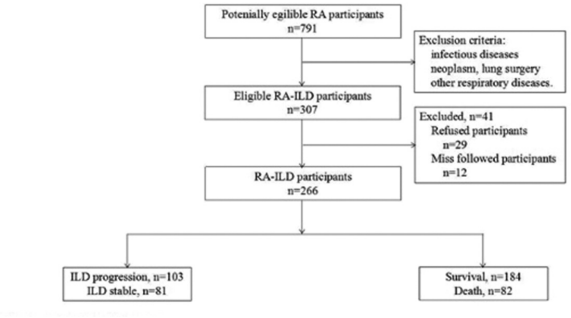
Background: Poor prognosis has been shown in rheumatoid arthritis-associated interstitial lung disease (RA-ILD) patients, and the mortality rate was significantly higher than RA patients without ILD. Studies showed that one-third of RA-ILD patients had progressed within two years. However, factors associated with ILD progression and survival in RA-ILD have not been previously described in a large centre China cohort.

Objectives: To investigate the risk factors for ILD progression and explore the prognostic factors for survival in RA-ILD patients.

Methods: 791 consecutive RA patients who completed lung HRCT were considered as potential participates. 266 RA-ILD patients were finally included in this retrospective cohort study. To identify independent risk factors for ILD progression, multivariate logistic regression analyses were used. Cox hazards analysis was used to determine significant variables associated with survival.

Results: 1, The mean age at diagnosis of RA-ILD was 64.80±10.71 years old. 162 (60.90%) were females and 104 (39.09%) were males. 2, UIP and NSIP pattern were the commonly types of RA-ILD, accounting for 37.22% and 25.94% respectively. Extent of lung involvement analysis showed that limited was predominant (130/266, 48.87%), with smaller numbers of moderate (67/266, 25.19%) and extensive (69/266, 25.94%) lung involvement. 3, The 3 year survival rate of RA-ILD patients was 81.24%, and the 5 year survival rate was 69.71%. A total of 82 deaths occurred during follow-up, of which 56 died of respiratory failure due to ILD progression and/or pneumonia, while 14 with malignancies (8 with lung cancer). 4, Logistic regression analysis showed that an increased anti-CCP antibody titer (OR: 4.03, 95% CI: 1.04–15.69, p<0.05) and DLCO%<45% (OR: 8.31, 95% CI: 2.17–31.75, p<0.01) were independent risk factors for the ILD progression. 5, Cox hazards analysis revealed that advanced age(>60 years old) of RA-ILD diagnosis (HR: 2.32, 95% CI: 1.27–4.25, p<0.05) and extensive lung involvement on HRCT (HR: 2.19, 95% CI: 1.24–3.87, p<0.05) were associated with worse survival. Treatment with cyclophosphamide (HR: 0.43, 95% CI: 0.26–0.69, p<0.01) was associated with better survival.



Abstract AB0295 – Figure 1. Study flow diagram

Conclusions: In RA-ILD patients, DLCO%<45% is the strongest predictor for ILD progression. Advanced age and extensive lung involvement on HRCT, rather than the baseline UIP pattern, independently predict mortality after controlling for potentially influential variables. Furthermore, cyclophosphamide treatment helps to improve the prognosis in real-world experience.

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AB0296 14–3–3ETA POSITIVITY IS ASSOCIATED WITH HIGHER RHEUMATOID ARTHRITIS DISEASE ACTIVITY MEASURED BY MULTI-BIOMARKER DISEASE ACTIVITY ASSAY

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Background: Early diagnosis of rheumatoid arthritis (RA) is crucial but recognition of its disease activity and prognosis can help tailor treatment for patients in order to avoid debilitating consequences. 14–3–3eta has been described to have diagnostic utility as a biomarker of RA; however its use as prognostic factor is still under investigation.[1] The η (eta) isoform is one of seven from the 14–3–3 family of regulatory proteins and is expressed extracellularly in much higher concentrations in the synovial fluid and serum of patients with RA. A multiple-biomarker disease activity (MBDA) score was recently introduced; 396 candidate cytokines and biomarkers were narrowed to twelve, correlating with disease activity.

Objectives: The purpose of our study was to investigate if 14–3–3η can be used as a prognostic factor and if it was associated with higher disease activity in RA patients. We compared the positivity of 14–3–3η in those with low, moderate, and high disease activity based on MBDA scores. In addition, as MBDA scores provide individual biomarker levels, we wanted to determine if there was a correlation between 14–3–3η and specific biomarker patterns.

Methods: A retrospective chart review was conducted on 70 RA patients (satisfied the 2010 ACR diagnostic criteria) at an outpatient rheumatology clinic in an inner-city population. Serum 14–3–3η protein was measured by ELISA with a positive threshold range (Quest Diagnostic) of 0.2 ng/mL. The MBDA scoring scale was 1–29 for low disease activity, 30–44 for moderate and 45–100 for high. The t-test was used to analyse for a significant difference in MBDA scores as well as individual biomarker levels in 14–3–3η positive patients.

Results: Of the 70 RA patients, 37 were 14–3–3η positive and 33 were negative. Thirty (81%) of 14–3–3η positive patients were on at least one DMARD compared to 16 (48.5%) of negative patients. The mean and median MBDA scores of 14–3–