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)	Difficultly 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)

^aReported by ≥25% of patients. ^bN includes 2 patients who chose CI as clear 1st choice and 8 patients who chose CI as clear 2nd choice. ^cBased 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 participants. 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–

3 η positive patients were 49.4 and 47, while negative patients' scores were 36.9 and 38, respectively ($p=0.002$). Thus, 14–3–3 η positive patients had high disease activity while 14–3–3 η negative patients had moderate disease activity. Mean levels of matrix metalloproteinase 3 (MMP-3), serum amyloid A (SAA), and CRP in 14–3–3 η positive versus negative were 52.3 ng/mL and 28.4 ng/mL ($p=0.01$), 24.3 mg/mL and 6.96 mg/mL ($p=0.02$), and 21.5 mg/L and 9.82 mg/L ($p=0.02$), respectively.

Conclusions: 14–3–3 η positive RA patients have higher disease activity based on MBDA score and are associated with higher levels of MMP-3, SAA, and CRP. MMP-3 is associated with joint destruction through degradation of the components of extracellular matrix in the synovial joint. SAA and CRP are acute phase reactants but SAA has been linked with increased cardiovascular and renal disease in RA patients. 14–3–3 η positive patients should be treated aggressively to decrease disease activity and limit extra-articular manifestations.²

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AB0297

PREDICTORS OF AN INADEQUATE RESPONSE TO TREATMENT IN LATIN AMERICAN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS

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Background: Inadequate response to treatment in early rheumatoid arthritis (RA) is associated with adverse consequences. We have previously shown high baseline levels of disease activity in Latin American RA patients.¹

Objectives: To identify the baseline predictive factors of inadequate response to treatment in patients with early RA from a GLADAR cohort, at one year from cohort entry.

Methods: GLADAR cohort includes 1093 consecutive RA patients with disease <1 year from 46 centres in 14 Latin American countries. For these analyses, patients with complete clinical and laboratory assessments with DAS28-ESR>3.2 at the baseline, and one-year follow up visits were included. Inadequate treatment response was ascertained with the EULAR definition which is based on DAS28-ESR obtained at one-year of follow up [a variation ≤ 0.6 in any category of activity (mild, moderate or severe) and a variation >0.6 but ≤ 1.2 in the high activity category]. Gender, age at diagnosis, diagnosis delay, socioeconomic status (by the Graffar scale), ethnicity, medical coverage, rural origin, rheumatoid factor (RF) positivity, disability (HAQ-DI), DMARDs use, corticosteroid use, and DMARD treatment delays were examined as potential predictive factors of this outcome. Univariable and multivariable binary logistic regression models, using a stepdown technique were examined in order to determine the predictors of response at 1 year.

Results: Four hundred and forty-eight patients were included. Three hundred and eighty-five (85.9%) were female; the mean (SD) age at diagnosis was 46.1 (13.6) years; 78.3% had medical coverage and 347 patients (77.5%) were RF

positive. The mean baseline DAS28-ESR was 6.3 (1.4). EULAR response was met by 347 (77.5%) patients at 1 year. Three hundred patients (67%) have received glucocorticoids, 78.8% at least one DMARD and only 1.1% had received at least one biologic compound. The baseline HAQ-DI was 1.5 (0.0–3.0). Predictors of non-EULAR response at 1 year were: female gender (OR=2.4; CI:1.0–5.6; $p=0.039$), a higher baseline HAQ-DI (OR=1.7; CI:1.2–2.4; $p=0.003$) whereas protective factors were higher DAS28-ESR (OR=0.6; CI:0.4–0.7; $p<0.001$) and having medical coverage (OR=0.5; CI:0.3–0.9; $p=0.025$).

Conclusions: We have identified baseline predictors of adverse response to treatment in LA patients with early RA. Absence of medical coverage seems to be an additional adverse factor associated with poor results. Other factors such as early response/remission or adherence to treatment should be taken into account.

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AB0298

A LOWER WAIST CIRCUMFERENCE IS ASSOCIATED WITH CLINICAL REMISSION IN PATIENTS WITH ESTABLISHED RHEUMATOID ARTHRITIS

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Background: Abdominal Obesity is highly prevalent in patients with RA and this condition is associated with adverse metabolic outcomes, but information about the impact of this condition in clinical activity disease is scarce, specially in our region

Objectives: To assess the association between central obesity with baseline clinical activity in a cohort of patients with established rheumatoid arthritis (RA).

Methods: Cross-sectional baseline analysis of a single centre RA cohort. This cohort began at 2011 and includes patients with a diagnosis of RA ACR EULAR 2010 criteria), followed by semestral visits. In this analysis, clinical disease activity was measured by SDAI, clinical remission and low disease activity (LDA) was defining according SDAI categories (a value <3.3 , and ≤ 11 , respectively), also definition of remission by the ACR-EULAR 2011 was applied (tender and swollen joint counts ≤ 1 , CRP ≤ 1 mg/dl, and PGA ≤ 1 with patient-reported outcomes on a scale of 0–10, or SDAI ≤ 3.3). Patients with chronic pain disease (fibromyalgia, neuropathic pain and neurologic disorders such as neuropathies) and diagnosis of depression were excluded. Waist circumference (WC) was measured as a continue variable (cm). Potential basal confounders associated with activity disease were analysed: socio demographics variables (age at diagnosis, gender, disease duration, delay of DMARDs treatment, education), anticitrullinated antibody peptide (antiCCP), medication (use and dose of corticosteroid, use of cDMARDs and bDMARDs). Continuous variables were expressed as means and SDs, and categorical variables as percentages and 95% confidence intervals (95% CIs). Univariable and multivariable binary logistic regression models were examined in order to determine the association between abdominal perimeter and remission.

Results: Four hundred and twenty-five from 596 subjects of the cohort were include. The mean (SD) age was 58.5 (11.8) years. Disease duration was 15.2 (14.0) years; 90.4% were women and 75.8% were anti CCP positive. Two hundred and fifty-one patients (59.1%) have received glucocorticoids, 50.1% at least one DMARD and only 5.4% had received at least one biologic compound. The mean WC was 98.2 (11.3) cm and central obesity prevalence was 87.8% in men and 96.7% in woman. The baseline SDAI was 29.9 (24.1). Remission was met only by 1.7% patients and remission/LDA by 13.2% subjects. In the univariate analysis, a less WC was associated with remission (OR=0.9; CI:0.8–0.9; $p=0.042$); this association remained significant in the multivariable analysis (OR=0.9; CI:0.8–0.9; $p=0.022$).

Conclusions: A lower waist circumference is associated with clinical remission in patients with established RA. This condition should be taken in account in the baseline measure of activity disease.

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