by the physician as quantitative data. Quantitation only of inflammation, while damage and distress are recorded only as narrative descriptions, may limit the capacity to document optimally both clinical status and the rationale for clinical decisions, such as non-intensification of therapy according to "treat-to-target" in patients who may have moderate or high scores on an RA index¹. We have used 0–10 visual analogue scales (VAS) to score not only physician global assessment (DOCGL), but also levels of inflammation, damage, and distress.

Objectives: To analyse 0–10 VAS for DOCGL, as well as for levels of inflammation, damage, and distress in patients with rheumatoid arthritis (RA).

Methods: At one academic site, rheumatologists complete four 0–10 VAS for overall physician global assessment (DOCGL), as well as for inflammation or reversible findings (DOCINF), joint and other organ damage or irreversible findings (DOCDA), and patient distress such as fibromyalgia, depression, etc. (DOCSTR). In a cross-sectional study, mean values of 4 physician VAS were computed in RA patients, and 3 subgroups were compared according to whether scores for inflammation were 2/10 units higher than for damage, similar for inflammation and damage (within 2/10 units), or 2/10 units higher for damage than for inflammation. Mean levels of the 4 VAS in the 3 groups were compared, using analysis of variance (ANOVA).

Results: In 50 unselected RA patients, mean 0–10 DOCGL VAS was 4.2, inflammation VAS 2.2, damage VAS 3.5, and distress VAS 2.2 (table 1). Only 9/50 patients had an inflammation VAS more than 2/10 units greater than damage VAS; in these patients, mean VAS for DOCGL=4.6, inflammation=4.9, damage=2.1, and distress=1.1. In 21 patients in whom inflammation=damage, mean VAS for DOCGL=3.9, inflammation=1.8, damage=2.1, and distress=3.2. In 20 patients with damage >inflammation, mean VAS for DOCGL=4.4, inflammation=1.4, damage=5.7, and distress=1.7.

Abstract AB0312 – Table 1

	DOC/INF> DOCDA	DOC/INF= DOCDA	DOC/ DAM> DOCINF	TOTAL
N	9	21	20	50
VAS DOCGL	4.6	3.9	4.4	4.2
Mean subscale VAS				
Scores:				
VAS DOCINF	4.9	1.8	1.4	2.2
VAS DOCDA	2.1	2.1	5.7	3.5
VAS DOCSTR	1.1	3.2	1.7	2.2

Conclusions: Physician VAS scores indicated that a damage VAS was 50% higher than an inflammation VAS in all 50 RA patients (3.5 vs 2.2), and identical (2.1) in the 9 with an inflammation VAS 2 units higher than a damage VAS or 21 with an inflammation VAS within 2 units of a damage VAS. A mean distress VAS was identical to an inflammation VAS (2.2) in the 50 patients. Control of inflammation remains a primary concern for rheumatologists, but has improved considerably in recent years, as damage and distress may have become more prominent in routine patient care. Systematic quantitative VAS assessment of damage and distress, in addition to inflammation, appears of value to document patient status and support clinical decisions.

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Disclosure of Interest: T. Pincus Shareholder of: Dr. Pincus holds a copyright and trademark for MDHAQ and RAPID3 for which he receives royalties and license fees. All revenue is used to support further development of quantitative questionnaire measures for patients and doctors in clinical rheumatology care., I. Castrejón: None declared, J. A. Block: None declared

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AB0313

PHYSICIAN GLOBAL ASSESSMENT OF THE STATUS OF PATIENTS WITH RHEUMATOID ARTHRITIS (RA) AT THEIR FIRST VISIT TO AN ACADEMIC ROUTINE CARE SETTING ARE EXPLAINED AS MUCH BY DAMAGE AND DISTRESS AS BY INFLAMMATION, ACCORDING TO PHYSICIAN RATINGS: SHOULD THE STRUCTURE OF RHEUMATOLOGY CARE BE MODIFIED?

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Background: A physician global assessment (DOCGL) on a 0–10 visual analogue scale (VAS) reflects inflammatory activity in patients who meet criteria for RA clinical trials, in which DOCGL is more efficient than laboratory tests or joint counts to distinguish active from control treatments.¹ However, in routine clinical

care, patients are not selected for inflammatory activity, and may have joint damage and/or distress (fibromyalgia, depression, etc.) as important clinical problems. Some rheumatologists consider damage and distress in assigning a 0–10 DOCGL; others consider only inflammation. One approach to resolve this matter is for physicians to estimate the proportion of DOCGL attributed to inflammation, damage, or distress (total=100%).

Objectives: To analyse a physician 0–10 VAS overall global assessment for estimates of the proportions attributed to inflammation, damage, or distress (total=100%).

Methods: Rheumatologists at one academic setting complete a 0–10 VAS for DOCGL, and estimates of the proportion of DOCGL attributed to inflammation, damage, and/or distress (total=100%). These scales were analysed in 38 new patients with RA seen between April and November 2017, using cross-tabulations to compare patients whose DOCGL was 0–4 vs 4.1–10 vs the proportion of inflammation, damage, or distress (total=100%) as 0%–40% or 41%–100%.

Results: Physician global assessment was 4–10 in 23/38 patients (61%) at first visit, and 0–4 in 15/38 (39%) (table 1). In all 38 patients, inflammation was rated as explaining 41%–100% of DOCGL in 11/38 (29%), compared to damage in 18/38 (47%), and distress in 6/38 patients (16%). Among the 23/38 patients with DOCGL 4–10, inflammation was rated as explaining 41%–100% of DOCGL in 6/23 (29%), versus 10/23 (43%) for damage, and 5/23 (22%) distress. Therefore, inflammation appear to account for >40% of DOCGL only in a minority of new RA patients, which were explained more by either damage or distress (or both).

Abstract AB0313 – Table 1. Number of patients in whom a 0–10 physician global assessment VAS was attributed by the physician to inflammation, damage, or distress (total=100%) at the initial visit of 38 patients with RA

Physician global assessment	All	0–4.0	4.1–10	All	0–4.0	4.1–10	All	0–4.0	4.1–10
% attributed by rheumatologist to...	Inflammation			Damage			Distress		
0%–40%	27	10	17	20	7	13	32	18	14
41%–100%	11	5	6	18	8	10	6	5	1
Total	38	15	23	38	15	23	38	15	23

Conclusions: At one academic rheumatology site, a physician global assessment VAS at the initial visit of patients with RA was explained as much by damage and/or distress as by inflammatory activity. One important limitation of the study is that some patients had already received treatment at other rheumatology sites. Nonetheless, the data indicate that damage and distress appear as prominent as inflammation in contemporary management of RA, reflecting a well-known delay in diagnosis and patient management. The findings suggest a possible need to restructure rheumatology practice to see patients more urgently, including education of primary care physicians, in order to improve outcomes for patients with RA. The data also support the possible value of physician estimates of the proportion of DOCGL attributed to inflammation, damage, or distress.

Disclosure of Interest: T. Pincus Shareholder of: Dr. Pincus holds a copyright and trademark on MDHAQ and RAPID3 for which he receives royalties and license fees. All revenue is used to support further development of quantitative questionnaire measures for patients and doctors in clinical rheumatology care., I. Castrejón: None declared, J. Block: None declared

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AB0314

SETTING TREATMENT TARGET FOR JOINT SURGERY IN LOWER LIMBS IN PATIENTS WITH LONG-STANDING RHEUMATOID ARTHRITIS BASED ON MULTICENTER PROSPECTIVE COHORT STUDY; VALIDATION AND RELIABILITY OF OBJECTIVE INDEX OF ACTIVITY SPEED, TIMED UP AND GO TEST, FOR MEASURING PHYSICAL FUNCTION

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Background: Total management including reconstructive joint surgery and rehabilitation should be needed for further improvements of physical function for long-

standing RA patients. It is very important to set treatment goal for those management.

Objectives: The purpose of this study is to set treatment target using Timed Up and Go test (TUG) in relation to achievement of HAQ-DI remission (HAQ-DI <0.5) with joint surgery in lower limbs.

Methods: Multicenter prospective observational cohort study was conducted among patients who underwent elective joint surgery for RA from April 2012 to March 2016 (Study registration: UMIN000012649). In this study, we collected data including age, sex, disease duration, drug therapies, and disease activity (DAS), TUG, and patient-reported outcome [HAQ-DI, EQ-5D (QOL), patient's global assessment (PtGA) and BDI-II (depression)] at baseline and at 6 or 12 months after the surgery. Association between TUG and achievement of HAQ remission and cut-off values for HAQ remission were also determined using logistic regression analysis with adjustment of age and sex and ROC curve, respectively.

Results: Totally, 139 patients with elective joint surgery in lower limbs were analysed. Mean age, disease duration, HAQ-DI and TUG were 65.4 years, 17.5 years, 1.022, and 12.7 s, respectively. Performed joint surgeries were total hip arthroplasty; 10.1%, total knee arthroplasty; 33.8%, total ankle arthroplasty or ankle fixation; 10.1%, and forefoot arthroplasty; 46.0%. The surgeries can significantly improve the outcome measures, including TUG, DAS, PtGA, pain, EQ-5D and BDI-II other than HAQ-DI. In this study, 45 of 139 patients (32.4%) had HAQ remission status at baseline. 18 of 94 patients (19.1%) who had HAQ-DI >0.5 can achieve HAQ remission with the surgery. Notably, TUG at last observation was significantly associated with achievement of HAQ remission even after adjustment for age, sex, and DAS (1 s increasing of TUG. OR:0.72, 95% CI: 0.53–0.97). The adjusted-TUG at last observation of patients with achievement of HAQ remission was 9.2 s (95% CI: 5.6–12.8) (figure 1). Cut-off of TUG at observation for achievement of HAQ remission was 9.2 s based on ROC analysis (figure 2). Importantly, We confirmed significant more improving of EQ-5D, HAQ-DI and TUG in patients who achieved TUG 9.2 s at last observation than in patients who did not (figure 3).

Abstract AB0314 – Figure 1

Conclusions: TUG was significantly associated with PRO; HAQ-DI and EQ-5D. The cut-off values of TUG (9.2 s) should be important to achieve good QOL and physical function for patients with joint surgery in lower limbs and could be suitable target for surgical procedure.

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AB0315

HIGH DISEASE ACTIVITY AT BASELINE, NOT RF NOR ACPA STATUS, PREDICTS INADEQUATE RESPONSE TO METHOTREXATE (MTX) IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS IN REAL WORLD: A SINGLE CENTRE COHORT IN JAPAN

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Background: In 2016 update of the EULAR recommendations for management of rheumatoid arthritis (RA), the poor prognostic factors include moderate to high disease activity according to composite measures and presence of Rheumatoid

factor (RF) and/or anti-citrullinated peptide antibodies (ACPA), especially at high levels.

Objectives: In this retrospective study, we investigated the association between baseline clinical prognostic factors and inadequate response to methotrexate for early RA in clinical practice.

Methods: Patients aged 18 years or over whose date of clinical onset of RA was within the previous 12 months to the first visit to our hospital from 2009 to 2016, who had at least 6 months of follow-up data and composite measure score (DAS-SER, DAS-CRP, SDAI, CDAI) recorded at 12 months from MTX treatment were included. Data collected included baseline demographics, rheumatoid factor (RF), ACPA status and the level of its titer, time from symptom onset to treatment and disease activity at baseline. In this study, we define that it was inadequate response to MTX (MTX-IR) when the patient didn't achieve low disease activity in at least three of four composite measures at 12 months after treatment, or was stopped to treat due to any reason or added biologic DMARDs (bDMARDs) in the observation period. Univariate and multivariate logistic regression of Inadequate response to MTX at 12 months after were performed.

Results: Data from 486 patients treated with MTX of 571 started to treat as early RA were analysed: 72.0% female; mean age 59.6 years (SD: 14.4); time from symptom onset to treatment is 7.3 months (SD 10.5); 66.1% RF-positive, 66.9% ACPA-positive. The number of patients is 138 (45.8% of ACPA positive) whose ACPA is in the higher level, over 150IU/ml. 411 patients were initially treated with MTX, and 75 were initially treated with other csDMARDs but added or changed to MTX within 1 years after treatment. Concomitant rate of corticosteroid at the start of MTX was 41.5% and mean dose of prednisolone was 5.7 mg/day. 270 (55.6%) patients were MTX-IR in 12 months after treatment. There is no significant difference between the dose of MTX at start in MTX-IR patients and that in others (6.70 versus 6.69 mg/week, respectively) but the dose at 12 months after treatment was 8.29 mg/w in MTX responders and significantly lower than that of MTX-IR, 8.68 mg/dl (p<0.05). The strongest baseline predictor of Inadequate response were Low disease activity at baseline, but there was no statistically significant association with sex, age at onset, RF or ACPA status additionally the level of its titers.

Conclusions: In this observational study, patients with early RA at risk of inadequate response to MTX include only with high disease activity at baseline, and the level of ACPA titers or other baseline characteristics don't predict it.

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AB0316

IS THERE A NEED TO RELOOK AT THE CUT OFFS OF RHEUMATOID FACTOR IN INDIAN POPULATION ?

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Background: Population specific cut offs of titers of Rheumatoid Factor (RF) in diagnosis of Rheumatoid arthritis (RA) and the role of anti citrullinated peptide antibodies (ACPA) remains unknown.

Objectives: To define cut offs for RF titres in diagnosis of RA in Indian population
Methods: RF titers of consecutive adult RA patients fulfilling ACR 1987 as well as ACR/EULAR 2010 criteria were compared with healthy normal and diseased non RA controls encountered in the rheumatology OPD of a tertiary care Armed forces Hospital using ROC-AUC analysis. Reclassification of disease phenotype as seropositive and seronegative RA using various the cutoffs was looked into and corresponding Anti-CCP titers in the subset of patients with RA was analysed.

Results: Overall 589 cases of RA (range: 18–69 years; 29.9% Females) were compared with age and sex matched 192 non RA and 51 controls. Mean (+SE) RF titers in RA cases was 107.7 IU/L (+ 6.17) while that in non RA disease cases was 29.3 IU/L (+ 6.08) and normal healthy controls 14.7 IU/L (0.43). ROC analysis revealed a cutoff titer of 20.3 IU/L (AUC 0.705 (95% CI:0.66–0.74)) with the best combination of sensitivity and specificity for a diagnosis of RA from non RA and healthy controls. With the currently used cut offs of 60 IU/L in our centre as well as high titre RF as per ACR/EULAR 2010 criteria, subjects were seropositive in 286/589 (48.5%) cases. Cutoffs of 40 IU/L and 20 IU/L led to a label of seropositivity in 322 (54.7%) and 396 (67.2%) cases respectively. Simultaneous Anti-CCP was done in 480 (81.4%) cases: 363 (75.6%) of these were positive. Using a cutoff of 60 IU/L as seropositive RA, anti CCP positivity was noted in 246/286 (86%) cases while with a cutoff of 40 IU/L and 20 IU/L it was 278/322 (86.3%) and 334/396 (84.3%) respectively. The RF titers in 117 anti-CCP negative cases was >20, >40 and >60 IU/L in 62 (52.9%), 44 (37.6%) and 40 (34.1%) cases respectively.

Conclusions: For this cohort of Indian population, a cut off of 20 IU/L of RF titers has the best performance for a diagnosis of RA with an additional 18.7% cases labelled as seropositive as against the current ACR cutoffs. Anti CCP positivity also no substantially changed by using this lower cutoff. There is a need to reevaluate the population specific RF titers in conjunction with anti-CCP in Indian population.

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