more sensitive and specific than the anti-AcLys ones. The two and their combination showed a conserved specificity for the seronegative patients, but a lower sensitivity than for the seropositive ones. Consequently, the PPV for the seronegative patients was low, although the NPV was high. In the same vein, the AUC was insufficient for the seronegative patients. The regression analysis including the anti-CCP and RF revealed a significant contribution of the anti-AcOrn antibodies (OR = 2.1, 95% CI = 1.1 – 4.0, P = 0.02), but not of the anti-AcLys antibodies. On the other hand, the inclusion of the AAPA in the classification resulted in an increase in sensitivity of 5.4% at the cost of a 13.7% lower specificity, which is an improvement over the anti-carbamylated protein antibodies.

Abstract THU0097 – Table 1. Parameters assessing the diagnostic value of the anti-acetylated peptide antibodies taken individually and in combination for the classification of the RA patients or the indicated patient subsets subset.

	anti-AcLys	anti-AcOrn	AAPA
Sensitivity			
all	37.9	44.2	50.5
anti-CCP-	16.9	16.9	22.5
anti-CCP- & RF-	15.7	15.7	21.6
Specificity			
all	84.5	86.6	81.0
anti-CCP-	87.4	87.9	83.8
anti-CCP- & RF-	86.8	86.8	82.8
PPV			
all	68.4	74.6	70.3
anti-CCP-	32.4	33.3	33.3
anti-CCP- & RF-	25.8	25.8	26.8
NPV			
all	60.5	63.6	64.8
anti-CCP-	74.6	74.7	75.1
anti-CCP- & RF-	77.8	77.8	78.3
AUC			
all	0.61	0.65	0.66
anti-CCP-	0.52	0.52	0.53
anti-CCP- & RF-	0.51	0.51	0.52

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Conclusion: The AAPA show high specificity and sensitivity for RA in early arthritis patients. However, their contribution to RA classification is minor once RF and the anti-CCP antibodies have been considered. But nevertheless, AAPA supports the drive to close the diagnostic gap in this early disease phase and to increase the likelihood of successful therapy.

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THU0098

WHICH FACTORS INFLUENCE ACHIEVEMENT OF TREATMENT SATISFACTION IN RHEUMATOID ARTHRITIS?

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Background: The satisfaction of RA patients with their pharmacological therapy is a relevant patient reported outcome which influences treatment

adherence and continuation. However, it has not been investigated frequently, and almost never in large studies.

Objectives: To assess factors exerting a potential influence on the satisfaction with the pharmacological treatment and to quantify this influence.

Methods: The German register RABBIT is a prospective longitudinally followed cohort of RA patients enrolled with a new start of a DMARD after at least one csDMARD failure. This analysis comprises patients who were enrolled with start of a DMARD between 01/2009 and 04/2018, who were observed for at least 12 months and had been on the therapy prescribed at enrolment for at least six months.

Abstract THU0098 –Table 1.

Table 1: Results of logistic regression to analyze potential factors influencing satisfaction with drug treatment

Parameter	Odds Ratio	95% confidence limits
Satisfied at treatment start	3.11	(2.61; 3.70)
DAS28 reduction (one unit) after one year	1.34	(1.26; 1.41)
Reduction (one unit on a scale of 1-10) of pain after one year	1.28	(1.23; 1.32)
Reduction of sleeping problems (one unit on a scale of 1-10)	1.01	(0.99; 1.04)
Reduction of fatigue (one unit on a scale of 1-10)	1.00	(0.97; 1.03)
Improvement of physical function by 10 percentage points of full capacity	1.19	(1.13; 1.26)
Prior biologic therapy	0.80	(0.67; 0.96)
Reduction of glucocorticoid dose (one log(mg)/d)*	1.37	(1.18; 1.59)
Congestive heart failure	1.08	(0.62; 1.90)
Diabetes	0.98	(0.77; 1.25)
Chronic kidney disease	0.96	(0.66; 1.38)
Prior malignancies	1.08	(0.74; 1.57)
Degenerative spine disease	0.93	(0.75; 1.14)
Degenerative joint disease	0.93	(0.75; 1.14)
Osteoporosis	0.86	(0.68; 1.07)
Fibromyalgia	0.75	(0.50; 1.13)
Depression	0.65	(0.50; 0.86)
Obesity	0.82	(0.69; 0.96)
Age at disease onset (years)	1.00	(0.996; 1.01)
Women (reference: men)	1.04	(0.87; 1.24)
Seropositivity (RF/ACPA)	1.13	(0.97; 1.32)
Ever smoked	1.09	(0.76; 1.04)
Smoking habits unknown	0.89	(0.74; 1.62)
Biologic therapy (reference: csDMARDs)	1.07	(0.90; 1.28)

*Due to a highly skewed distribution of the glucocorticoid dose, the reduction of the logarithmically transformed glucocorticoid dose was used in the model.

Satisfaction with the applied treatment was measured in four categories from "very satisfied" to "very unsatisfied". Logistic regression combined with multiple imputation of missing values was performed to calculate odds ratios (ORs) for factors which might have an influence on treatment satisfaction.

Results: At treatment onset, 55% of the 8,177 patients were "very" or "rather" satisfied (in the following: "satisfied"), while the rest was "very" or "rather" unsatisfied (in the following: "unsatisfied") with their therapy. After one year of treatment, 86% of patients were satisfied with their treatment. Factors with positive impact on whether patients reached the target of treatment satisfaction were satisfaction at baseline, reduction of DAS28-BSG, pain and glucocorticoid dose as well as the increase of physical function. Depression, obesity as well as a prior treatment failure of bDMARDs had a negative influence on the outcome (see Table 1). The DAS28 component most influential on treatment satisfaction was the patient global health assessment. Regarding glucocorticoid therapy, being still treated with either 5 to 15 mg (OR: 0.66, 95% CI: 0.55; 0.79) or ≥ 15 mg glucocorticoids (OR: 0.25, 95% CI: 0.15; 0.41) had a negative impact on the achievement of therapy satisfaction (data not shown).

Conclusion: Reductions in disease activity, pain and glucocorticoid dosage as well as improvement of physical function increase the chance to achieve treatment satisfaction. On the other hand, depression and obesity as well as prior treatment failures with bDMARDs are obstacles to therapy satisfaction. For physicians, these results suggest that efforts to taper glucocorticoid doses are worthwhile to improve patient's satisfaction.

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THU0099

DEVELOPMENT OF A NEW PATIENT-GENERATED OUTCOME MEASURE TO IDENTIFY DISEASE-SPECIFIC DISTRESS IN PEOPLE WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid Arthritis (RA) is a progressive inflammatory disease which causes pain, joint damage and disability. Patients with RA may experience psychological distress in addition to their physical symptoms. They may also experience disease-specific distress (DSD), which is related to the burden of living with their life-long illness. This phenomenon has been identified in patients with other long-term conditions, e.g. cancer, Irritable Bowel Disease, and Diabetes. In type 1 and 2 diabetes elevated DSD is associated with poorer clinical outcomes, and effective interventions can reduce diabetes distress. Patient involvement in the development of patient generated outcome measures (PGOM's) is important, as they may have different perspectives about their health condition that researchers and/or health care professionals may not have considered. Previous secondary data analysis of patient interviews has suggested that DSD does seem to exist in people with RA, as an entity distinct from other forms of psychological difficulties.

Objectives: The aim of this study was to develop a PGOM, based on previously reported domains of distress, to identify DSD in people with RA for use in clinical and research practice. The study aimed to involve patients in the development of the new outcome measure.

Methods: A three-phase qualitative study was conducted. In Phase 1 items were generated from secondary data analysis of patient interviews. In Phase 2, a focus group of people with RA were consulted with the aim to establish initial face and content validity of the measure and perform item reduction. In Phase 3, individual cognitive interviews (n=9) with people with RA were conducted to further establish face and content validity of the Scale, refine items if necessary and ensure the questionnaire 'made sense' to participants. A psychometrician was consulted to consider the development of the new Scale.

Results: In Phase 1, 44 items were initially created to form the Rheumatoid Arthritis Distress Scale (RADS). After Phase 2 and 3 focus group and cognitive interviews respectively, items were reduced from 44 to 39 and three additional supplementary questions were created, to include items such as time since diagnosis and disease activity. Dimensions were classified into five domains of RA distress. Overall participants reported the content of the RADS to be clear and relevant, and that DSD is a valid concept in RA, distinct from clinical depression or anxiety.

Conclusion: DSD appears to be an important concept in RA. The 39-item RADS currently demonstrates acceptable face and content validity in this patient group. It may be beneficial to establish face and content validity in a more diverse patient sample before proceeding with further psychometric testing. The RADS may be a useful tool for healthcare professionals to identify DSD in patients with RA. Direct patient involvement and their commitment have been instrumental in the development of new outcome measures.

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THU0100

PHYSICAL FUNCTION IN RA PATIENTS IN REMISSION UNDERGOING TAPERING AND/OR STOPPING OF DMARDS

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Background: Several studies including our own RETRO study have shown that tapering or stopping disease modifying anti-rheumatic drugs (DMARDs) in rheumatoid arthritis (RA) patients in sustained remission is feasible (1-3). However, tapering/stopping bears the risk of decline in physical function as some patients may relapse and face increased disease activity.

Objectives: Here we analysed the impact of tapering or stopping DMARD treatment on the physical function of RA patients, who were randomized into continuation, tapering or stopping DMARD treatment in the RETRO study.

Methods: RETRO is a multicentre, parallel-group phase 3 trial in which RA patients in stable DAS-28-ESR remission were randomized to (i) DMARD tapering, (ii) stopping DMARDs after a 24-week-taper or (iii) control strategy that continued DMARDs.^{1,2,3} HAQ and DAS-28 scores were measured at 0, 3, 6, 9 and 12 months.^{1,2} Functional worsening was defined as a HAQ increase of ≥ 0.25 . We calculated incidences of functional worsening (per 100 person-months) in each treatment group with 95% Poisson confidence intervals and plotted event-free survival by treatment arm. The effect of treatment reduction strategy on functional worsening was assessed in a recurrent-event Cox regression model with control, taper or taper/stop group as the predictor.

Results: 201 patients were analysed. In 44 patients functional worsening was observed. Incidence (95%CI) of functional worsening was in the control 1.48 (0.77-2.59), taper 1.74 (0.95-2.92) and taper/stop arm 1.96 (1.16-3.10). The incidences suggest higher probability of functional worsening in tapering and/or stopping DMARDs, however at the end of study, functional worsening was similar among the groups (Figure). Thus, in comparison to the control group, hazard ratio (HR) (95%CI) for functional worsening was 1.21 (0.56 -2.62) in the taper arm and 1.32 (0.76-2.60) in the taper/stop arm.

Conclusion: Point estimates and survival curves show that functional decline after tapering or stopping DMARDs in RA patients with stable remission is small. Although the incidence figures suggest a trend these results do not reject with good certainty the null hypothesis of no worsening in functional status.

Abstract THU0100 – Figure 1.

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