and 63% positive for anti-cyclic citrullinated peptide antibodies. Overall, 33.1% (591/1776) of patients had an MTC. A markedly larger percentage of patients with high disease activity had MTC (range 55.1%–43.5%) compared to patients with moderate disease (range 38.7%–27.8%) (table 1). Sensitivity, specificity, predictive values, and accuracy at each DAM threshold level varied markedly by DAM, with RAPID3 having a higher sensitivity, lower specificity, and less accuracy than DAS28 or CDAI (table 2).

Abstract FRI0018 – Table 1. Rates of MTC Stratified by DAM

	Patients with MTC, n/N (%)		
	DAS28	CDAI	RAPID3
High	165/313 (52.7%)	231/419 (55.1%)	346/795 (43.5%)
Moderate	285/737 (38.7%)	219/601 (36.4%)	155/558 (27.8%)
Low	72/283 (25.4%)	105/547 (19.2%)	47/217 (21.7%)
Remission	69/443 (15.6%)	36/209 (17.2%)	43/206 (20.9%)

n, number of patients with MTC; N, number of patients with level of disease severity.

Abstract FRI0018 – Table 2. Performance of DAMs for Prediction of MTC

		Positive Threshold		
		High	High/ Moderate	High/ Moderate/ Low
Sensitivity	DAS28	27.9%	76.1%	88.3%
	CDAI	39.1%	76.1%	94.9%
	RAPID3	58.5%	84.8%	92.7%
Specificity	DAS28	87.5%	49.4%	31.6%
	CDAI	84.1%	51.9%	14.6%
	RAPID3	62.1%	28.1%	13.8%
Positive Predictive Value	DAS28	52.7%	42.9%	39.2%
	CDAI	55.1%	44.1%	35.4%
	RAPID3	43.5%	37.0%	34.9%
Negative Predictive Value	DAS28	70.9%	80.6%	84.4%
	CDAI	73.5%	81.3%	82.8%
	RAPID3	75.0%	78.7%	79.1%
Accuracy	DAS28	67.7%	58.3%	50.5%
	CDAI	69.1%	60.0%	41.0%
	RAPID3	60.9%	47.0%	40.0%

Conclusions: Most patients with high/moderate disease activity did not have a MTC. This observation was consistent regardless of which DAM was utilised. MTC increased with disease activity with all DAMs; however, DAS28 and CDAI appeared to have greater accuracy than RAPID3 at predicting MTC at all disease severity thresholds. There is need for continued evaluation of DAM thresholds for defining disease activity for MTC decisions, better DAMs, and/or better application of DAMs in clinical practice to improve the treatment of patients with active RA.

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FRI0019

ARE DISEASE ACTIVITY, DISABILITY OR PSYCHOLOGICAL FACTORS MOST ASSOCIATED WITH PATIENTS WITH RHEUMATOID ARTHRITIS BEING SATISFIED WITH THEIR CONDITION AFTER 12 MONTHS FOLLOWING TREATMENT ONSET?

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Background: An important treatment goal in the management of patients with rheumatoid arthritis (RA) is patients being satisfied with their condition, the patient acceptable symptom state (PASS). It is unclear whether reduction in disease activity, the main therapeutic aim of RA treatment, is associated with reaching PASS, or whether reductions in other factors are also important.

Objectives: To analyse change over one year of disease activity, patient reported outcomes (PROs) and psychological factors and their association with PASS at one year.

Methods: The Rheumatoid Arthritis Medication Study (RAMS) is a prospective cohort of patients with RA starting MTX for the first time in the United Kingdom. At baseline and one year, patients reported demographics and completed pain and fatigue visual analogue scales (VAS-pain/VAS-fatigue), the Hospital Anxiety and Depression Scale (HADS-A, HADS-D) and the Health Assessment Questionnaire (HAQ). A research nurse performed a 28 swollen and tender joint count (SJC28/TJC28) and the disease activity score (DAS28) was calculated. Patients answered the question "Is your current condition satisfactory, when you take your general functioning and your current pain into consideration?" at baseline and at one year. Only patients not in PASS at baseline are included in this analysis. Change in disease related factors (SJC28, TJC28, DAS28), PROs (HAQ, VAS-pain, VAS-fatigue), and psychological factors (HADS-A, HADS-D) from baseline to one year were calculated (see table 1). Predictors of PASS at one year were assessed using multivariable logistic regression, adjusting for age and gender. The discriminative power of disease activity, PROs and psychological factors were assessed by comparing the area under the curve (AUC) of the receiver operating characteristic curve.

Results: Of 358 not in PASS at baseline (mean (SD) age: 58.1 (13.0) years; 244 (68.2%) women), 241 (67.3%) were in PASS after one year. The only independent predictors of PASS were change in HAQ, VAS-pain and HADS-D (OR (95% CI) per unit change from baseline: HAQ 0.38 (0.16, 0.91); VAS-pain 0.96 (0.95, 0.98); HADS-D 0.86 (0.75, 0.99)). The model containing PROs had significantly greater AUC compared to a disease activity model (0.91 vs. 0.84, $p=0.004$) and a psychological factors model (0.91 vs. 0.81, $p<0.0001$).

Abstract FRI0019 – Table 1. Baseline, one year and change scores stratified by whether patients were in PASS at one year

		Median (IQR) baseline score		Median (IQR) one year score		Median (IQR) Change	
Variable		PASS at one year	Not-PASS at one year	PASS at one year	Not-PASS at one year	PASS at one year	Not-PASS at one year
Disease activity	SJC28	6.5 (2.5, 11.0)	6.0 (3.0, 12.0)	0.0 (0.0, 2.0)	3.0 (0.0, 7.0)†	-5 (-9, -2)	-2 (-6, 1)†
	TJC28	6.0 (3.0, 12.0)	9.0 (5.0, 17.0)†	1.0 (0.0, 4.0)	8.0 (2.0, 14.0)†	-4 (-9, -1)	-2 (-8, 3)†
	DAS28	4.6 (3.8, 5.4)	4.9 (4.2, 5.8)	2.7 (2.1, 3.5)	4.3 (3.5, 5.3)†	-1.6 (-2.9, -0.8)	-0.6 (-1.6, 0.4)†
PROs	HAQ	1.3 (0.8, 1.8)	1.4 (1.0, 1.9)	0.6 (0.1, 1.1)	1.5 (1.0, 1.9)†	-0.5 (-1.0, -0.1)	0.0 (-0.4, 0.3)†
	VAS-Pain	63 (46, 75)	68 (50, 80)	18 (7, 33)	60 (41, 76)†	-38 (-55, -18)	-5 (-24, 9)†
	VAS-Fatigue	62 (37, 74)	72 (57, 85)†	29 (13, 54)	70 (55, 83)†	-24 (-43, -1)	-1 (-17, 12)†
Psychological	HADS-D	7 (4, 10)	8 (5, 10)	3 (1, 6)	8 (5, 11)†	-2 (-5, 0)	1 (-1, 2)†
	HADS-A	6 (4, 10)	8 (4, 12)†	4 (2, 8)	8 (4, 11)†	-2 (-4, 0)	0 (-2, 2)†

† $p<0.05$, † $p<0.01$ – PASS groups compared using quantile regression

DAS28 = Disease Activity Score 28, HADS-A = Hospital Anxiety and Depression Scale (Anxiety), HADS-D = Hospital Anxiety and Depression Scale (Depression), HAQ = Health Assessment Questionnaire, IQR = Interquartile range, PASS = Patient acceptable symptom state, PROs = Patient Reported Outcomes, SJC28 = swollen joint count (28), TJC28 = tender joint count (28), VAS = visual analogue scale.

Conclusions: Change in PROs have a greater association with attaining PASS at one year compared to disease related or psychological factors and should be taken into account when designing treatment strategies.

Disclosure of Interest: None declared

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FRI0020

ANTI-CEP-1 ANTIBODIES AND OTHER AUTOANTIBODIES IN EARLY ARTHRITIS

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Background: As it is very important to identify patients with a high risk of developing rheumatoid arthritis (RA), new, diagnostic methods, evaluating the possibility of progression from undifferentiated arthritis (UA) to RA are needed.

Objectives: The aim of this work was the evaluation of the frequency of rheumatoid factor, anti-cyclic citrullinated peptide (anti-CCP) antibodies, mutated citrullinated vimentin antibodies (a-Sa), anti-CEP-1 antibodies, anti-filaggrin antibodies (AFA), heterogeneous nuclear ribonucleoprotein compies/anti-RA33-antibody (HnRNP/RA33), anti-CarP antibodies (a-Carp) in patients with early arthritis.

Methods: 74 patients with early arthritis and 20 healthy volunteers were enrolled to the study. 51 patients were diagnosed with RA, 23 with UA. Exclusion criteria were the application of disease-modifying antirheumatic drugs or glucocorticosteroids. In all patients the following laboratory tests were performed: inflammatory markers, rheumatoid factor (RF) and antibodies mentioned above, together with necessary diagnostic that enables diagnosis.

Results: In patients with early arthritis the sensitivity and specificity of the presence of RF was 69% and 95%, respectively, and of anti-CCP was 67% and 97%. In patients with early arthritis we observed significantly higher concentration of CEP-1 (65.8±111.6) than in the healthy group (2.0±0.0). In RF(+) RA patients we