Table1.

		Total (n=149)	Adults (n=92)	Elderly (n=57)
Age	mean(SD)	57(15.4)	47(12.2)	71(5.63)
Female	n(%)	128 (85.9)	77 (83.7)	51 (89.4)
Disease duration (year)	mean(SD)	8.4(10.0)	7.1(7.55)	10(12.9)
DAS28 ESR	mean (SD)	4.74(1.37)	4.54(1.38)	5.08(1.30)
HAQ	mean (SD)	0.61(0.66)	0.49(0.56)	0.78(0.76)

Table2.

	regression coefficient	95%CI	*p* value
Adults	reference	–	–
Elderly	-7.24	-11.7 to -2.7	0.0018

Multiple liner regression analysis
Adjuseted with sex, disease duration, DAS28-ESR, HAQ, and complications (interstitial lung disease, diabetes mellitus, and chronic kidney disease).

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AB0259 PREDICTORS OF HIGH DISEASE ACTIVITY IN A COHORT OF GREEK PATIENTS WITH ACPA POSITIVE EARLY RHEUMATOID ARTHRITIS

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Background: In Early Rheumatoid Arthritis, the presence of ACPA positivity is associated with increased disease activity.
Objectives: To investigate possible predictors, for high disease activity (DAS-28 >5.1), in a cohort of Greek patients with ACPA positive early RA.
Methods: From 2000 until December 2016, 156 patients with ACPA positive early RA, were diagnosed and subsequently followed up as outpatients at the Rheumatology Unit of our hospital. Demographic, clinical, laboratory and therapeutic parameters were evaluated during every follow-up. At the end of the study (last visit during 2016), all the above parameters were re-evaluated, considering the high disase activity (DAS-28 >5.1). The used methods were χ^2, ANOVA, Binary Logistic Regression (BLR) and ROC Curve.
Results: From 156 patients, 25% were males, 37.8% were current smokers, 76.9% were RF positive, 34.6% presenting with extra-articular manifestations and 16% with anemia of chronic disease (ACD). At the time of diagnosis, Univariate analysis revealed that smokers, RF positivity, high levels of CRP, patients with extra-articular manifestations and those with ACD, corellate statstically significant with high disease activity (p=0.011, p=0.006, p=0.03, p=0.001 and p=0.001 respectively). Using the BRL we found that the odds ratio for DAS-28 >5.1, were for smokers 2.95, for RF positivity 3.397 and for CRP 1.066 respectively. Based on the previous results the severity of disease can be predicted with sensitivity 80% (area unedr the curve: p<0.001, CI=0.723–0.878) using the ROC curve.
Conclusions: |High Diseasae Activity in ACPA positive early RA, at diagnosis, is best predicted by smoking, RF positivity and high levels of CRP.
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AB0260 THE PREDICTORS OF FRAGILITY FRACTURES IN PATIENTS ON AROMATASE INHIBITORS: AN OBSERVATIONAL STUDY

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Background: The use of aromatase inhibitors (AIs), given after breast cancer, has been associated with a low bone mineral density (BMD) and as a risk factor for fragility fractures. We have reported on the risk factor for low BMD in a previous abstract and it showed that the use of AIs significantly reduced lumbar spine BMD and femoral neck BMD (1). The FRAX ™ tool uses the femoral neck BMD to predict fractures on a population basis but ignores the lumbar spine. Some patients who have undergone bilateral hip replacements would not be able to estimate their FRAX ™ risk accurately.
Objectives: To determine the predictors of fragility fractures in an observational cohort of female patients on aromatase inhibitors.
Methods: Female patients referred for BMD estimation in a scanner in the North West of England between 2004 and 2014 on aromatase inhibitors were identified from a dual X-ray absorptiometry database. Demographics and other risk factors, as well as fragility fractures, were recorded. Initially, those who had sustained a fracture were compared to those who had not sustained a fracture using chi-squared tests for categorical variables and T-tests for continuous variables. Following that, univariate and multivariate logistic regression models were fitted looking at the predictors of fracture. Variables included age at scan, height, weight, alcohol, smoking, family history, rheumatoid arthritis, secondary osteoporosis as defined by FRAX™, body mass index and steroid exposure, in addition to BMD in the lumbar spine and femoral neck.
Results: 2029 female patients were scanned in the referral period. The mean age at scan was 66 (SD 10.46). 356/2029 (17.55%) had sustained a fracture. Results of the univariate analysis are shown in table 1, significant predictors are indicated with an asterisk (*).

Predictor	All Pts	Pts with Fracture	Pts without Fracture	p-value	Odds ratio (95% CI)
Age at scan (years)	65.85	69.41	65.09	0.00	1.04 (1.03,1.05)*
Height (cm)	160.40	159.60	160.57	0.02	0.98 (0.96,1.00)*
Weight (kg)	72.38	71.35	72.60	0.15	1.00 (0.99,1.00)*
Alcohol	123 (6.06%)	22 (6.18%)	101 (6.04%)	0.92	1.03 (0.64,1.65)
Smoking	698 (34.40%)	132 (37.08%)	566 (33.83%)	0.24	1.15 (0.91, 1.46)
Family Hx	247 (12.17%)	48 (13.48%)	199 (11.89%)	0.41	1.15 (0.82,1.62)
RA	32 (1.58%)	10 (2.81%)	22 (1.32%)	0.04	2.17 (1.02,4.62)*
Secondary op	183 (9.02%)	46 (12.92%)	137 (8.19%)	0.01	1.66 (1.17,2.37)*
Femoral Neck BMD (g/cm^2)	0.87	0.82	0.88	0.00	0.02 (0.01,0.05)*
Lumbar Spine BMD (g/cm^2)	1.10	1.05	1.12	0.00	0.12 (0.06,0.24)*
BMI (kg/m^2)	28.13	28.00	28.16	0.61	0.99 (0.97,1.02)
Steroid	466 (22.97%)	77 (21.63%)	389 (23.25%)	0.51	0.91 (0.69,1.20)

In the multivariate model, the variables that predicted fractures in this cohort were age at scan (OR 1.03 95% CI 1.02,1.05), femoral neck BMD (OR 0.74 95% CI 0.02,0.29) and lumbar spine BMD (OR 0.34 95% CI 0.14,0.80). Using the femoral neck multivariate model resulted in an area under the curve of 0.6720 and using the lumbar spine was 0.6653.
Conclusions: In the univariate analysis, many risk factors are associated with fractures within this cohort of female patients on aromatase inhibitors but both univariate analysis and multivariate analysis showed that lumbar spine BMD is a good predictor of fractures. This is not included in the FRAX ™ tool and would enable fracture risk to be calculated in patients who have undergone hip replacements.
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Disclosure of Interest: None declared
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AB0261 CLINICAL AND STRUCTURAL RESPONSES OF PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS (RA) USING STEP-UP DOSAGES OF TOFACITINIB IN A TREAT TO TARGET APPROACH

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Background: Tofacitinib has been shown to reduce the clinical signs and symptoms of some RA patients at an approved dose of 5 mg bid. Studies report that 10 mg bid is an effective dose. This is the first community practice trial to measure the clinical and structural benefits of stepping up the initial dose of 5 mg bid in non-responders to 10 mg bid in order to achieve a clinical response using a treat to target approach.
Objectives: This study evaluates the optimal dose of tofacitinib (5 mg bid VS 10 mg bid) needed to reach treatment target in a cohort of patients with active RA while comparing the corresponding structural findings measured by low field MRI.
Methods: 20 RA patients who were unresponsive to either methotrexate (10–25 mg weekly) or MTX plus up to 2 prior biologics with synovitis, osteitis or erosions on Baseline MRI (Esaote 0.3T) were treated with 5 mg bid tofacitinib with a treat to target goal of Low Disease Activity (LDA) or remission depending on the Clinical Activity Index (CDAI) score at Baseline. If the target was not met and sustained for 3 months, the dose of tofacitinib was increased to 10 mg bid in an attempt to reach target. MRIs of the hand/wrist were blindly read by a musculoskeletal radiologist using a rheumatoid arthritis MRI scoring system (RAMRIS). A CDAI score of >10 was needed at study entry.
Results: Of the 20 enrolled patients, 6 remained at 5 mg bid and 14 were dose escalated to 10 mg bid most at the 12 week period. Of the 5 mg bid group, 3 completed the trial at target and 3 early termed (ET) for lack of efficacy, relocation and AE. Structurally, there was no change in erosions in all 3 patients; 2 showed regression of synovitis and 1 showed no change; 2 showed regression in osteitis and 1 no change. Of the 14 patients escalated to 10 mg bid, 11 completed the trial with 7 remissions, 2 at LDA, and 1 at MDA. 3 patients ET due to lack of efficacy. In the 10 mg bid group, 9 patients showed no change in erosions, 1 regression and 1 progression. 5 patients showed no change in synovitis and 6 showed regression, and 7 showed no change in osteitis, 3 showed regression and 1 showed progression. The CRP values correlated with the improvement of

the clinical and structural results, in particular, the levels improved after the dose was increased to 10 mg bid.

Patient	CDAI BSL	CDAI 3 Mnth All taking 5 mg bid	CDAI 12 Mnth Remain on 5 mg bid	CDAI 12 Mnth Dose Increased 10 mg bid
001	24.9	0.6	6	
002	56.1	20.9		2.7
003	45.9	27.4		2.3
004	65.2	33.8		0
005	56.1	15.5		3.1
006	34.7	38.9		19.4
007	27.9	56		1.5
008	34.3	18.4		1.8
009	43.6	3.3	2.3	
010	33.5	12.6		ET
011	32.7	5.1	ET	
012	25.3	13		0
013	21.2	2.4	ET	
014	21.6	9.9		2.9
015	21.6	5.2		ET
016	27.7	0.4	ET	
018	31.8	16.9		2.1
019	27.3	0.9		5.2
020	14.5	5.2		ET
021	30.5	2.1	1.9	

Conclusions: Our results suggest that a significant number of patients treated with the standard dose of 5 mg bid may potentially have improved outcomes including LDA or remission when treated at a higher dose (10 mg bid). As is evidenced by the results in this study, 11 of the 14 patients had significant improved response after treatment with the step up dose. It would appear that this improved result occurs by 3 months of therapy. Furthermore, the structural findings correlate in large part to the clinical findings showing stabilization or improvement in the majority of patients. A larger study is needed to validate these clinical and structural responses as well as to evaluate the safety outcomes using 10 mg bid for intervals of more than 12 months.

Disclosure of Interest: None declared

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AB0262 EVALUATION OF PATIENT REPORTED OUTCOME USING RAPID3 AND HAQ-DI COMPARED TO DAS28: EXPERIENCE FROM ROUTINE CLINICAL PRACTICE IN MALAYSIA

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Background: Patient reported outcome (PRO) is an important measure to physician in management of patient with rheumatic diseases. Health assessment questionnaire disability index (HAQ-DI) is the most widely used PRO tool in rheumatoid arthritis (RA) clinical trials. Previous studies have shown that HAQ-DI correlates well with disease activity score of 28-joints (DAS28). However, routine assessment of patient index data 3 (RAPID3) is much simpler and faster questionnaire to score.

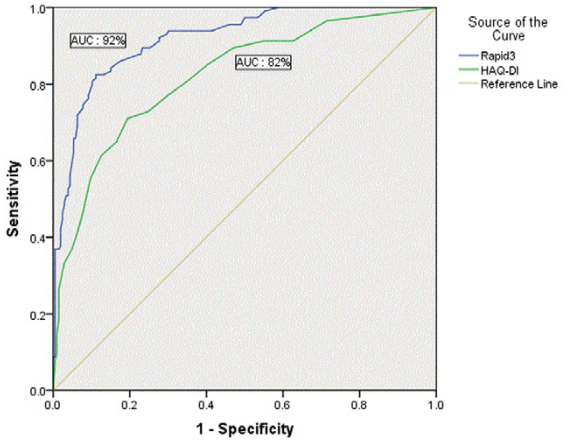
Objectives: This study aims to evaluate the correlation between RAPID3 and DAS28 compared to HAQ-DI and DAS28 in our population.

Methods: RA patients who received routine treatment in Hospital Tuanku Ja'afar from March to November 2016 were included in this study. Validated RAPID3 and HAQ-DI questionnaire were made available in other languages; Malay, Chinese and Tamil, for patients who were not English literate. Descriptive analysis were conducted. Pearson correlation was used to measure the correlation between these PRO tools while area under the curve of the receiver operating characteristic (ROC) curves evaluate the sensitivity to detect disease activity. DAS28-ESR and DAS28-CRP were used as the reference variable in ROC analysis to stratified the disease activity into two groups; low (remission and low) and high (moderate and high) disease activity.

Results: A total of 400 patients completed PRO assessments were available for analysis. The median age of our cohort was 57 years old (range 22 to 88) and 87.5% were female. Ethnic distribution in this cohort were as follows; 38.5% Indian, 31.8% Malay and 27.8% Chinese. Both RAPID3 ($r=0.74, p<0.001$) and HAQ-DI ($r=0.57, p<0.001$) were correlated with DAS28-ESR. The area under the curve was significantly higher in RAPID3 (83%) compared to HAQ-DI (75%) which implied greater performance in discriminating low and high disease activity using DAS28-ESR as reference. We observed similar performance trend between RAPID3 (92%) and HAQ-DI (82%) compared to DAS28-CRP.

Conclusions: In conclusion, RAPID3 is an effective quantitative measure of disease activity compared to HAQ-DI in our population. Furthermore, RAPID3 yield similar disease activity categories as DAS28 without the need of joint counts

ROC Curve to discriminate low and high disease activity using DAS28CRP as reference.



and laboratory tests. Hence is an informative assessment of disease activity in busy clinic settings.

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AB0263 PREDICTIVE VALUE OF A SINGLE MEASUREMENT OF THE MULTI-BIOMARKER DISEASE ACTIVITY (MBDA) SCORE FOR DISEASE FLARES WITHIN 6 AND 12 MONTHS IN RHEUMATOID ARTHRITIS PATIENTS USING TUMOR NECROSIS FACTOR INHIBITORS AND CONVENTIONAL SYNTHETIC DMARDS

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Background: Rheumatoid Arthritis (RA) patients in the maintenance phase should be treated by escalating antirheumatics up to stable low disease activity and then often are treated with tumor necrosis factor inhibitors (TNFi) and conventional synthetic disease modifyers (csDMARD). Once this phase has been reached the risk of flare is an issue once drugs are to be tapered or discontinued.

Objectives: To examine the ability of the multi-biomarker disease activity (MBDA) score as predictor for disease flare in rheumatoid arthritis (RA) patients with stable low disease activity using tumor necrosis factor inhibitors (TNFi) and conventional synthetic disease modifyers (csDMARD).

Methods: Data were used from the continuation control group of the Dutch multicenter, open-label, POET trial, in which patients with stable low disease activity (disease activity score [DAS28] <3.2 for at least 6 months] were randomized to either stop or continue TNFi treatment. Three indicators of disease relapse were assessed: 1) flare based on DAS28 (DAS28 ≥ 3.2 with ΔDAS28 >0.6), 2) flare based on escalation of any DMARD therapy, and 3) flare based on physician-reported disease activity. Associations between baseline MBDA score and meeting the different criteria for disease flare within 6 or 12 months of follow-up were examined using univariate analysis and multivariate logistic regression adjusting for baseline DAS28 score.

Results: For this post-hoc analysis, baseline serum samples to measure MBDA scores were available for 225/286 (78.7%) of the patients randomized to the TNFi continuation group (88.9% also used methotrexate, another 8.0% used another csDMARD and 3.1% used no csDMARD): 86.2% with a first TNFi, 11.6% with second TNFi and 2.2% with a third TNFi. Within 12 months, 19.1% of patients had experienced a DAS28 flare, 12.0% had medication escalation and 8.0% had ≥ 1 physician-reported flare. Median time to DAS28-based flare was 26 weeks (IQR:13–28). Univariately, patients with high baseline MBDA (>44) scores (n=31) were at increased risk of experiencing a DAS28 flare within 6 (OR =4.39, P=0.001) or 12 (OR =2.78, P=0.015) months. MBDA scores were not associated with increased risk of medication escalation or physician-reported flare. After adjustment for baseline DAS28 scores, high MBDA score remained predictive for risk of flare within 6 months (OR =3.15, P=0.017), but not for flare within 12 months (OR =2.05, P=0.107).