Figure 1. Mean baseline values with 95% confidence interval.

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THU0074

EVALUATION OF MEDICATION PERSISTENCE IN PATIENTS WITH RHEUMATOID ARTHRITIS AND SJOÖGREN'S SYNDROME/INTERSTITIAL LUNG DISEASE TREATED WITH NON-TNFI DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS

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Background: RA is a systemic disease driven by pathogenic autoantibodies and inflammatory cytokines that can involve tissues and organs as well as synovial joints. Sjögren's syndrome (SS) and interstitial lung disease (ILD) are frequently reported extra-articular manifestations of RA. However, there are currently limited data on the persistency of non-TNFi inhibitor (TNFi) biologic (b)DMARDs and targeted synthetic DMARDs, such as tofacitinib (TOF), in patients (pts) with SS and ILD secondary to RA (RA-SS and RA-ILD).

Objectives: To compare medication persistence between non-TNFi DMARDs including abatacept (ABA), TOF and tocilizumab (TOC) in RA-SS and RA-ILD.

Methods: Pts (≥ 18 years) from the Truven MarketScan™ administrative claims database with RA (≥ 2 prescription claims for RA identified with International Classification of Diseases [ICD]-9 or ICD-10) being treated with a non-TNFi DMARD from Jan 2006 to Sep 2017 were included. The date of the first claim for a drug of interest on or after diagnosis of RA was considered the index date. Pts were required to have at least 6 months of continuous enrolment prior to the index date (baseline). Pts with claims for other bDMARDs on the index date were excluded from the study. Pts with a diagnosis of SS or ILD any time in the baseline or follow-up periods were included in the RA-SS or RA-ILD cohorts, respectively. Persistence was defined as the number of days from index date to first switch or discontinuation of the index date DMARD, or end of the study period, or end of enrolment, whichever came first. Pts in both cohorts were stratified by prior TNFi use (TNFi-naïve or TNFi-experienced) and by prior corticosteroid (CS) use. Pairwise comparison of persistence between the non-TNFi DMARDs was performed with ABA as the reference, using the Kruskal-Wallis test for both cohorts separately. A p value of <0.05 was considered statistically significant.

Results: A total of 2503 and 3856 pts satisfied the inclusion and exclusion criteria for the RA-SS and RA-ILD cohorts, respectively. In the RA-SS cohort, 1767, 378 and 358 pts were taking ABA, TOF and TOC, respectively; in the RA-ILD cohort, these numbers were 2937, 343 and 576. The majority (90% in RA-SS and 75% in RA-ILD) of the study population was female. In the RA-ILD cohort, the proportion of pts with prior CS use was significantly lower in pts taking ABA (vs TOF). In the RA-SS cohort, the comorbidity index between treatment cohorts was similar; however, ABA pts had significantly lower pulmonary nodules vs TOF pts (Table 1). In the RA-ILD cohort, the comorbidity index was significantly lower for ABA (vs TOF and TOC), with differences in types of comorbidities at baseline (Table 1). In the RA-SS cohort, the mean time on therapy for pts in the ABA cohort was longer compared with pts in the TOF cohort. Persistency of ABA was higher compared with TOF in the TNFi-experienced pts and in CS-experienced pts (Table 2). In the RA-ILD cohort, overall mean time on therapy for pts taking ABA was longer

compared with TOC. Persistency of ABA was higher compared with TOC in the TNFi-naïve cohort.

Conclusion: Based on the analysis of a large US claims database, pts with RA-SS prescribed ABA (vs TOF) had higher persistency, and pts with RA-ILD prescribed ABA (vs TOC) had higher persistency. Further analysis of medication persistence, adjusting for pt characteristics, is warranted.

Abstract THU0074—Table 1. demographics

Table 1. Baseline characteristics by cohort

	RA-SS cohort			RA-ILD cohort		
	ABA (n=1767)	TOF (n=378)	TOC (n=358)	ABA (n=2937)	TOF (n=343)	TOC (n=576)
Mean (SD) age, years	55.1 (11.4)	54.6 (10.5)	55.6 (12.1)	61.4 (12.0)	62.4 (11.3)	60.6 (12.8)
Female, n (%)	1635 (92.5)	349 (92.3)	325 (90.8)	2247 (76.5)	262 (76.4)	449 (78.0)
TNFi-experienced, n (%)	829 (46.9)	175 (46.3)	213 (59.5)*	1338 (45.6)	132 (38.5)*	297 (51.6)*
CS use, n (%)	1114 (63.0)	257 (68.0)	221 (61.7)	1885 (64.2)	261 (76.1)*	375 (65.1)
CCI score, mean (SD)	1.4 (0.9)	1.4 (0.9)	1.5 (0.9)	1.8 (1.2)	2.0 (1.3)*	1.9 (1.4)*
Select comorbidities, n (%)						
COPD/asthma	19 (1.1)	7 (1.9)	6 (1.7)	118 (4.0)	39 (11.4)*	40 (6.9)*
Pneumonia	60 (3.4)	19 (5.0)	16 (4.5)	309 (10.5)	53 (15.5)*	68 (11.8)
Pulmonary nodule	47 (2.7)	22 (5.8)*	12 (3.4)	216 (7.4)	81 (23.6)*	89 (15.5)*
Heart failure	42 (2.4)	3 (0.8)	5 (1.4)	219 (7.5)	31 (9.0)	45 (7.8)
Dyslipidaemia	269 (15.2)	66 (17.5)	67 (18.7)	526 (17.9)	104 (30.3)*	138 (24.0)*
Ischemic heart disease	100 (5.7)	19 (5.0)	22 (6.1)	418 (14.2)	70 (20.4)*	68 (11.8)
Osteoarthritis	524 (29.7)	126 (33.3)	118 (33.0)	935 (31.8)	127 (37)	209 (36.3)*
Lupus	171 (9.7)	26 (6.9)	37 (10.3)	132 (4.5)	9 (2.6)	28 (4.9)
Infections	953 (53.9)	198 (52.4)	187 (52.2)	1613 (54.9)	192 (56.0)	330 (57.3)

*p<0.05 vs ABA

ABA=abatacept; CCI=Charlson Comorbidity Index; COPD=chronic obstructive pulmonary disease; CS=corticosteroid; RA-ILD=patients with interstitial lung disease secondary to RA; RA-SS=patients with Sjögren's syndrome secondary to RA; TNFi=TNF inhibitor; TOC=tocilizumab; TOF=tofacitinib

Abstract THU0074—Table 2. demographics

Table 2. Persistence by cohort: overall and stratified by prior TNFi and CS use

	RA-SS cohort			RA-ILD cohort		
	ABA (n=1767)	TOF (n=378)	TOC (n=358)	ABA (n=2937)	TOF (n=343)	TOC (n=576)
Overall	n=1767 367.9 (440.5) 204	n=378 281.2 (310.3)* 167	n=358 316.1 (343.6) 175	n=2937 367.4 (439.9) 211	n=343 315.3 (317.9) 186	n=576 316.0 (366.9)* 179
TNFi-naïve	n=938 357.9 (447.8) 193	n=203 269.6 (281.9) 178	n=145 297.5 (374.6) 147	n=1599 358.5 (426.5) 201	n=211 307.3 (317.3) 165	n=279 269.7 (316.6)* 156
TNFi-experienced	n=829 379.1 (432) 225	n=175 294.7 (340.5)* 163	n=213 328.7 (321.1) 190	n=1338 378 (455.3) 223	n=132 328.3 (319.5) 211.5	n=297 359.6 (408) 208
CS-naïve	n=663 368.4 (441.7) 197	n=121 327.2 (313.6) 235	n=137 311.2 (351.5) 175	n=1052 360.7 (443.7) 208	n=82 363.1 (322.8) 281	n=201 303.9 (357.4) 175
CS-experienced	n=1114 367.6 (440) 205	n=257 259.6 (306.9)* 138	n=221 319.1 (339.4) 190	n=1885 371.1 (437.8) 213	n=261 300.3 (315.4)* 164	n=375 322.6 (372.2)* 181

Values expressed as mean (SD) median, in days reported

*p<0.05 vs ABA

ABA=abatacept; CS=corticosteroid; RA-ILD=patients with interstitial lung disease secondary to RA; RA-SS=patients with Sjögren's syndrome secondary to RA; TNFi=TNF inhibitor; TOC=tocilizumab; TOF=tofacitinib

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THU0075

EARLY VERSUS DELAYED START OF BARICITINIB IN PATIENTS WITH RHEUMATOID ARTHRITIS IN A PHASE 3 TRIAL OF PATIENTS NAÏVE TO METHOTREXATE TREATMENT

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Background: Baricitinib (bari) is an oral Janus kinase (JAK)1/JAK2 inhibitor approved to treat moderately to severely active rheumatoid arthritis (RA) in adults in over 50 countries including European countries, the US and Japan. In the 52-week (wk) Phase 3 RA-BEGIN study, bari 4-mg alone or in combination with methotrexate (MTX) showed clinical improvements compared to MTX monotherapy for MTX-naïve patients (pts) with early active RA.¹

Objectives: To assess if pts who receive bari monotherapy early attain enhanced clinical, functional and radiographic outcomes compared to pts who initiated MTX and switched to bari at wk 52.

Methods: In RA-BEGIN, 588 pts (mean disease duration 1.4 years) were randomized 4:3:4 to MTX, bari 4-mg once-daily, or combination MTX and bari 4-mg. At Wk 52, pts could enter a long-term extension study in which all pts received open-label bari 4-mg. Pts initially randomized to bari 4-mg monotherapy were defined as early-start and MTX pts who switched to bari 4-mg at Wk 52 were defined as delayed-start for this analysis. Change from baseline using mixed model repeated measures and mean scores were assessed for the Simplified Disease Activity Index (SDAI), Clinical Disease Activity Index (CDAI), Disease Activity Score 28-joints-high-sensitivity C-reactive protein (DAS28-hsCRP), Disease Activity Score 28-joints-erythrocyte sedimentation rate (DAS28-ESR), Health Assessment Questionnaire-Disability Index (HAQ-DI), and modified Total Sharp Score (mTSS) to compare early- vs delayed-start groups between Wks 0 and 100 (Wks 52-100 for mTSS). Percent of pts achieving low disease activity (LDA, SDAI ≤ 11) and remission (SDAI ≤ 3.3) were also assessed.

Results: LDA and remission response rates in the delayed-start group increased from 60% to 78% and 18% to 31%, respectively, within 4 wks after switching to bari 4-mg. Remission rates reached 47% within 1 year after switching, but were not different from the group that initiated bari (Figure 1). Similar results were seen for CDAI, DAS28-ESR, and DAS28-hsCRP (only up to Wk 40 for DAS28-ESR) (data not shown). Pts initially randomized to bari 4-mg had significantly greater change from baseline, observed as early as Wk 1 and up to Wk 52, for HAQ-DI than pts treated with MTX (Figure 2). After switching to bari, the delayed-start group showed a rapid improvement in HAQ-DI with similar improvement at Wk 56 – 4 wks after switching to bari. Upon initiating bari, there was a reduction in the rate of structural damage; however, delaying initiation of bari for 1 year resulted in numerically higher mTSS.

Conclusion: In early MTX-naïve pts, improved clinical, functional, and radiographic efficacy with bari 4-mg vs MTX was observed in most outcome measures up to 52 wks. Switching from MTX to bari at Wk 52 provided a rapid clinical response, allowing the majority of pts to achieve similar results 4 wks post-switch. However, if the goal of therapy is to achieve rapid and sustained control of disease activity, the differences noted here for HAQ-DI and especially structural progression support earlier switch to bari for pts who do not obtain disease control with MTX. Further analysis may be needed to explore prognostic factors, such as hsCRP and disease duration (< or >6 months), baseline erosion, or anticitrullinated protein antibody positivity, which may help clinicians identify pts who may benefit from earlier treatment with bari.

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Figure 1. Percent of patients achieving low disease activity (SDAI ≤ 11) or remission (SDAI ≤ 3.3) in the early (baricitinib group) and delayed (MTX group) start patients *P-value ≤ 0.05 , ** ≤ 0.01 , *** ≤ 0.001 vs MTX. Note: Dashed lines indicate that at Week 52 all MTX patients who entered the LTE were switched to baricitinib 4-mg. MTX=methtexate; SDAI=Simplified Disease Activity Index.

Abstract THU0075 – Figure 1

Figure 2. Efficacy outcomes in the early (baricitinib group) and delayed (MTX group) start patients *P-value ≤ 0.05 , ** ≤ 0.01 , *** ≤ 0.001 vs MTX. Note: Dashed lines indicate that at Week 52 all MTX patients who entered the LTE were switched to baricitinib 4-mg. HAQ-DI=Health Assessment Questionnaire-Disability Index; LSM=least squares mean; MTX=methtexate; mTSS=modified Total Sharp Score

Abstract THU0075 – Figure 2

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THU0076 THE IMPACT OF VARYING EXCLUSION CRITERIA ON TREATMENT RESPONSE: REAL-WORLD EVIDENCE TO GUIDE THE DESIGN OF FUTURE CLINICAL TRIALS

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Background: Clinical trials of novel pharmaceuticals in Rheumatoid Arthritis routinely use strict inclusion/exclusion criteria aimed at selecting a defined homogeneous population and producing a non-confounded demonstration of the agent's clinically relevant pharmacologic effect. However, the act of strictly defining numerous individual criteria has the potential