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SAT0085 A MATRIX RISK MODEL FOR PREDICTING 5-YEAR RADIOGRAPHIC PROGRESSION IN A COHORT OF EARLY RHEUMATOID ARTHRITIS TREATED ACCORDING TO T2T STRATEGY

Anna Laura Fedele, Dario Bruno, Barbara Tolusso, Luca Petricca, Gianfranco Ferraccioli, Elisa Gremese. *Division of Rheumatology, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy*

Background: In the treatment strategy of early rheumatoid arthritis (ERA) it is of pivotal importance to detect those patients who are at risk of radiographic progression (RP) in order to avoid decline in both functional capacity and quality of life.

Objectives: To identify baseline predictive factors for 5-year RP in an observational cohort of ERA treated according to treat-to-target (T2T) strategy, and to create a matrix risk model including the strongest predictors.

Methods: A total of 212 ERA patients with less than 12 months of disease duration (mean age 52.8±13.9 years, 75% female, 74.5% seropositive) and with available radiographs at 5 years of follow-up (FU), were enrolled in the study. ERA patients fulfilled the 2010 ACR criteria for RA and were followed according to the T2T strategy. At baseline, and every three months, the ACR/EULAR core data set variables were recorded. At baseline and every year, hand and foot radiographs were examined according to modified Total Sharp score (mTSS). At each visit, clinical improvement and remission were evaluated according to EULAR criteria. The achievement of Comprehensive Disease Control (CDC) (28-joint Disease Activity Score using C reactive protein <2.6, Health Assessment Questionnaire <0.5 and change from baseline in mTSS ≤0.5) was assessed every year of FU.

Results: Fifty-six ERA patients (26.4%) had erosions on hand and foot radiographs performed at baseline.

At 5 years of FU additional 56 subjects (26.4%) developed RP. ERA patients showing RP were in higher percentage ACPA positive (78.6%) and erosive at baseline (41.1%) compared to subjects not manifesting RP (65.4% ACPA positive, $p=0.07$; 21.2% erosive at baseline, $p=0.004$, respectively). Moreover, radiographic progressors had a VERA disease (disease duration less than three months) with lower frequency (21.4%) compared to non progressors (34.6%, $p=0.07$). CDC was achieved at twelve months of FU more frequently by non progressors (52.6%) compared to patients developing RP (30.4%, $p=0.004$). There were no differences regarding age, disease duration, BMI and smoking habit. Comparing the treatments between the two groups, we found similar frequencies of conventional and biotechnological drugs.

In logistic regression analysis, the variables predictive of 5-year RP were ACPA positivity [OR (95%CI): 2.51 (1.12-5.63)], presence of erosions at baseline [OR (95%CI): 2.42 (1.16-5.06)] and not reaching CDC at the twelfth month of FU [OR (95%CI): 2.38 (1.18-4.76)]. Combining the coexistence of erosions at baseline and ACPA positivity (registered in 35 subjects, 16.5% of the total cohort), the risk of RP increased [OR (95%CI): 3.50 (1.55-7.88)].

Dividing patients according to autoantibody positivity, the independent variables associated to RP were the presence of erosions at baseline [OR (95%CI): 2.91 (1.28-6.63)] and not having a VERA disease [OR (95%CI): 2.86 (1.06-7.69)]. In seronegative subjects predictive factors of RP were not identified.

Using the parameters showing the strongest association with RP, three-parameter risk matrix was created, showing the proportion of ERA patients with RP in each box (Figure 1).

The higher proportion of RP was showed in ACPA positive patients, regardless of all the other baseline predictors.

Conclusion: In our cohort the predictive factors of 5-year RP were ACPA positivity, presence of erosions at baseline and not achieving CDC at 12th of FU. Although CDC is the advisable treatment goal, the radiological damage is not fully prevented in case of ACPA positivity.

Figure 1. Three-parameters risk matrix showing the proportion of ERA patients with RP.

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SAT0086 EVALUATION OF MEDICATION PERSISTENCE IN PATIENTS WITH RHEUMATOID ARTHRITIS TREATED WITH NON-TNFI DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS

Leticia Fern¹, Evo Alemao¹, Sonie Lama¹, Aarti Rao². ¹Bristol-Myers Squibb, Princeton, United States of America; ²Mu Sigma, Bangalore, India

Background: Persistence to prescribed biologic (b)DMARDs, such as TNF inhibitors (TNFi), in patients (pts) with RA has been suboptimal, with rates ranging from 30–80%. There are limited data on the persistence of non-TNFi bDMARDs and targeted synthetic DMARDs, such as tofacitinib (TOF).

Objectives: To compare medication persistence in pts with RA treated with different non-TNFi DMARD treatment options including abatacept (ABA), TOF and tocilizumab (TOC), and to evaluate characteristics (e.g. demographics, comorbidities, baseline treatments) of these pts.

Methods: Pts (≥18 years) from the Truven MarketScanTM administrative claims database with RA (≥2 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 of 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 of other bDMARDs at the index date were excluded from the study. Persistence was defined as the number of days from the index date to the first switch or discontinuation of the index date DMARD, or end of the study period, or end of enrolment, whichever came first. Pts 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 Kruskal-Wallis test. A p value of <0.05 was considered statistically significant.

Results: A total of 30,556 pts satisfied the inclusion and exclusion criteria, of which 20,410, 5048 and 5098 were initially treated with ABA, TOF and TOC, respectively. Overall, the ages of therapy initiation for the ABA and TOF cohorts were comparable, while the TOC cohort was slightly younger. The majority (80%) of the study population was female. The proportion of pts with prior CS use was lower in the ABA cohort vs the other cohorts. Overall, the comorbidity index between treatment cohorts was similar; however, there were some differences in types of comorbidities at baseline (Table 1). The ABA cohort tended to have a lower proportion of pts with chronic obstructive pulmonary disease/asthma, pulmonary nodule, dyslipidaemia and osteoarthritis, while the proportions of pts with heart failure, ischemic heart disease and lupus were higher relative to other cohorts (Table 1). Overall, mean (SD) time on therapy for pts in the ABA cohort was longer compared with pts in the TOF (338 [418] vs 257 [288] days) and the TOC cohorts (338 [418] vs 294 [345] days). Similar differences were observed when further stratified by pts' prior use of TNF and CS (Table 2).

Conclusion: Based on the analysis of a large US claims database, pts with RA who were prescribed abatacept had higher persistency with therapy compared with other non-TNFi DMARDs such as TOF and TOC, regardless of prior use of TNFi and CS. Further analysis of medication persistence adjusting for pt characteristics is warranted.

Table 1. Baseline characteristics by cohort

	ABA (n=20,410)	TOF (n=5048)	TOC (n=5098)
Age, years, mean (SD)	55.4 (12.6)	55.1 (11.7)	54.2 (13.1)*
Female, n (%)	16,784 (82.2)	4123 (81.7)	4107 (80.6)*
TNF-experienced, n (%)	10,171 (49.8)	2431 (48.2)*	2895 (56.8)*
CS use, n (%)	12,167 (59.6)	3379 (66.9)*	3148 (61.7)*
CCI score, mean (SD)	1.4 (1.0)	1.4 (0.9)	1.4 (1.0)
COPD/asthma	282 (1.4)	123 (2.4)*	103 (2.0)*
Pneumonia	661 (3.2)	131 (2.6)*	158 (3.1)
Pulmonary nodule	437 (2.1)	182 (3.6)*	185 (3.6)*
Heart failure	623 (3.1)	107 (2.1)*	132 (2.6)
Dyslipidaemia	3185 (15.6)	926 (18.3)*	951 (18.7)*
Ischaemic heart disease	1448 (7.1)	324 (6.4)	307 (6.0)*
Osteoarthritis	5623 (27.6)	1648 (32.6)*	1594 (31.3)*
Lupus	929 (4.6)	148 (2.9)*	169 (3.3)*
Infections	9347 (45.8)	2196 (43.5)*	2300 (45.1)

*p<0.05 vs ABA

ABA=abatacept; CCI=Charlson Comorbidity Index; COPD=chronic obstructive pulmonary disease; CS=corticosteroid; TOC=tocilizumab; TOF=tofacitinib

Table 2. Persistence by cohorts: overall and stratified by prior TNF and CS use

	ABA n=20,410 337.9 (416.8) 191	TOF n=5048 257.3 (288.0)* 151	TOC n=5098 294.0 (345.1)* 168
TNF-naïve	n=10,239 328.1 (409.7) 179	n=2616 252.9 (285.3)* 146	n=2203 276.7 (341.2)* 148
TNF-experienced	n=10,171 347.7 (423.7) 201	n=2430 262.1 (290.9)* 159	n=2895 307.2 (347.6)* 178
CS-naïve	n=8243 333.0 (415.1) 186	n=1668 263.4 (289.6)* 160	n=1950 288.7 (335.8)* 165
CS-experienced	n=12,167 341.1 (418) 194	n=3378 254.3 (287.3)* 148	n=3148 297.3 (350.8)* 169

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

*p<0.05 vs ABA

ABA=abatacept; CS=corticosteroid; TOC=tocilizumab; TOF=tofacitinib

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SAT0087

REAL-LIFE GOLIMUMAB PERSISTENCE IN PATIENTS WITH CHRONIC INFLAMMATORY RHEUMATIC DISEASES: FINAL RESULTS OF THE GO-PRACTICE STUDY

René-Marc Flipo¹, Florence Tubach², Jean Ouaniche³, Philippe Goupille⁴, Eric Lespessailles⁵, Najat Gouyette⁶, Naoual Harid⁶, Saannya Sequeira⁷, Philippe Bertin⁸, Bruno Fautrel². ¹University hospital of Lille, LILLE, France; ²Pitié Salpêtrière University Hospital, PARIS, France; ³Private practice Toulon, TOULON, France; ⁴University hospital of Tours, TOURS, France; ⁵Hospital of Orléans, Orléans, France; ⁶MSD France, Courbevoie, France; ⁷Clinsearch, Malakoff, France; ⁸University Hospital of Limoges, Limoges, France

Background: Golimumab (GLM) is the fifth, most recent anti-TNF α to be indicated in the treatment of chronic inflammatory rheumatic diseases. GO-PRACTICE aimed to assess GLM use in real-life clinical practice, in patients with rheumatoid arthritis (RA), psoriatic arthritis (PsA), and axial spondyloarthritis (AS).

Objectives: Primary objective was to assess the persistence of GLM over 2 years after initial prescription. Cumulative persistence probabilities were estimated with the Kaplan-Meier method. Secondary objectives included evaluations of: 1) clinical disease activity from inclusion to 2 years (with DAS28 for RA and PsA; ASDAS for AS); 2) change in patient reported evaluations of pain (VAS [0-100]), disease activity (RAPID3 for RA and PsA; BASDAI for AS), functional ability (HAQ) and quality of life (EQ-5D and SF-12); 3) GLM clinical safety.

Methods: Observational, prospective, multicenter French study. Patients ≥ 18 years with RA, PsA and AS were included consecutively, following GLM initiation and were followed-up for 2 years. Data were collected at baseline (BL), year 1 and year 2.

Results: 770 patients selected from January 2015 to March 2016 at 134 sites, of which 754 included in the analysis. Mean age was 46 years and 61% were female. Most had AS (63%), followed by RA (23%) and PsA (14%). Mean duration of rheumatic disease was 7.6 years and 37% had previously received biologics; the proportion of patients who received 1, 2, 3 and ≥ 4 biologics were 18%, 11%, 6% and 2%, respectively. Most patients were prescribed 50mg GLM monthly (97%). Concomitant treatments included disease-modifying anti-rheumatic drugs (38%), corticosteroids (19%) and NSAIDs/analgesics (71%).

Persistence of GLM at 2 years was 52.4% (56.5%, 45.1% and 52.6% for RA, PsA and AS respectively), and in the AS group was higher for biologics naïve than biologics pretreated patients (59.2% vs. 42.7%, $P<0.01$). Disease activity showed clinically significant improvements from BL to 2 years in persisting patients. For RA, mean DAS28-CRP from 4.3 ± 1.1 to 2.3 ± 0.8 ($P<0.0001$), mean RAPID3 from 4.5 ± 1.8 to 1.8 ± 1.7 ($P<0.0001$). For PsA, mean DAS28-CRP from 3.9 ± 1.0 to 2.0 ± 0.8 ($P<0.0001$), mean RAPID3 from 5.3 ± 1.4 to 2.8 ± 2.2 ($P<0.0001$). For AS, mean ASDAS-CRP from 3.2 ± 0.8 to 1.7 ± 1.0 ($P<0.0001$), mean BASDAI from 5.5 ± 1.6 to 2.8 ± 1.9 , ($P<0.0001$). Pain, HAQ, EQ-5D and SF-12 also improved significantly over 2 years.

During the study, 67 (8.9%) patients discontinued GLM due to intolerance or adverse event (AE); reported AEs were consistent with GLM's known safety profile. Post-hoc multivariate analyses with sociodemographic and medical history variables showed that for GLM discontinuation over the 2 years, gastrointestinal disease was a risk factor in RA patients [HR 3.9, CI95% (2.0-7.6)] and being female was a risk factor in AS patients [HR 1.9, CI95% (1.4-2.6)]. GLM was re-prescribed for 338 (93.4%) of 362 patients who persisted on GLM at 2 years.

Conclusion: GLM persistence in real-life is satisfactory at 2 years and accompanied by clinical improvements in RA, PsA and AS patients.

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