Medication Adherence, Persistence, and Treatment Switching in Patients Receiving Advanced Therapies for Rheumatoid Arthritis in Clinical Practice

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OBJECTIVE

To evaluate 1-year treatment adherence, persistence, and switching for upadacitinib vs other advanced therapies (ATs) in TNF inhibitor (TNFi)-experienced patients with RA

CONCLUSIONS

Overall, treatment adherence was significantly higher, and rates of treatment discontinuation or switching were significantly lower for patients initiating upadacitinib compared with other ATs after recent TNFi treatment

The FDA safety warning for tofacitinib did not appear to significantly impact treatment persistence across AT classes

These data highlight the potential benefit of initiating upadacitinib after discontinuing a TNFi vs initiating another TNFi or non-TNFi AT, including other JAK inhibitors

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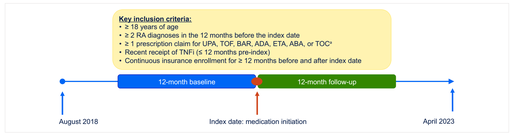
INTRODUCTION

- Following treatment failure with an initial TNF inhibitor (TNFi), guidelines recommend patients with RA be treated with advanced therapies (ATs) with alternative mechanisms of action[1]
- Poor adherence and persistence on ATs contribute to suboptimal outcomes in patients with RA[2]
- It is important to evaluate these outcomes with upadacitinib (UPA), the most recently approved AT for RA,[3] following treatment with TNFi to help inform treatment decision-making

METHODS

- This retrospective study used data from the Merative™ MarketScan® Research Database (August 2018–April 2023) **(Figure 1)**
- Eligible patients had received a first prescription claim for:
  - JAK inhibitors (JAKis): UPA, tofacitinib (TOF), baricitinib (BAR)
  - TNFis: adalimumab (ADA), etanercept (ETA)
  - Non-TNFi biologics: abatacept (ABA), tocilizumab (TOC)
- Outcomes were assessed during 12-month follow-up:
  - Adherence: percentage of patients who were adherent to treatment, defined as proportion of days covered (PDC) ≥ 80%
  - Persistence: discontinuation or treatment switch rate 12 months after index treatment initiation, and mean or median days on treatment in 12 months after initiation
    - Discontinuation was defined as a gap in treatment of ≥ 60 days based on pharmacy or medical claims
- Adjusted odds ratios (aOR) and adjusted hazard ratios (aHR) with 95% CIs were estimated for comparisons of treatment adherence and treatment discontinuation or switching, respectively
  - Models were adjusted for age, sex, Charlson Comorbidity Index, and number of ATs received anytime before the index date
- Stratified analyses were conducted to determine the potential impact of the FDA warning (September 1, 2021)[4] on JAKi safety on treatment persistence of the included ATs
  - Patients were stratified according to index medication follow-up occurring fully before, fully after, or with overlap of the FDA warning date
- Subgroup analyses evaluated treatment persistence among patients with use of a single TNFi as their only prior AT

Figure 1. Study Design



[a]Data from 2007 onward (as available) were used for purposes of identifying any past use of the index medication.

RESULTS

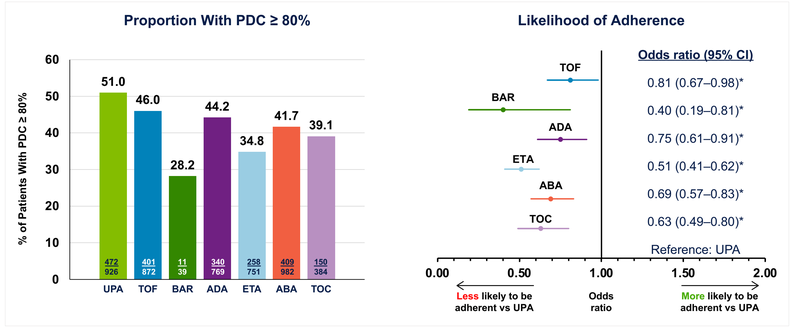
- Demographic characteristics and comorbidity burden were similar between ATs, while ADA and ETA initiators had used fewer prior ATs **(Table 1)**
- At 1 year, compared with UPA initiators, patients initiating each other AT were significantly less likely to be adherent to treatment **(Figure 2)** and significantly more likely to discontinue or switch treatment **(Figure 3)**
- Median time on treatment was greater for UPA initiators (>366 days) compared with TOF (289 days), BAR (149 days), ADA (252 days), ETA (211 days), ABA (282 days), and TOC (239 days) through 1 year **(Figure 4)**
- Discontinuation or switch rates for index medications with follow-up occurring fully before, fully after, or with overlap of the FDA warning on JAKi safety were comparable to the overall results **(Figure 5)**
- Among patients with use of a single TNFi as their only prior AT, UPA initiators had the lowest rate of discontinuation or switch at 1 year compared to each other AT (UPA 47.4%; TOF 54.7%; BAR 71.4%; ADA 54.9%; ETA 63.9%; ABA 52.8%; TOC 62.0%)

Table 1. Baseline Characteristics

Characteristic	UPA N = 926	TOF N = 872	BAR N = 39	ADA N = 769	ETA N = 751	ABA N = 982	TOC N = 384
Age (years), mean ± SD	51.6 ± 9.6	50.9 ± 9.9	50.2 ± 8.0	50.5 ± 10.5	49.6 ± 10.8	51.8 ± 10.3	51.0 ± 10.9
Female, n (%)	740 (79.9)	698 (80.1)	29 (74.4)	610 (79.3)	592 (78.8)	805 (82.0)	310 (80.7)
Charlson Comorbidity Index, mean ± SD	1.5 ± 1.0	1.5 ± 1.0	1.5 ± 1.0	1.6 ± 1.0	1.5 ± 1.1	1.7 ± 1.1	1.6 ± 1.1
Number of prior advanced therapies, mean ± SD	2.1 ± 1.5	1.8 ± 0.9	3.1 ± 1.9	1.3 ± 0.7	1.3 ± 0.7	2.0 ± 1.0	2.3 ± 1.3
Number of prior TNFi, mean ± SD	1.5 ± 0.7	1.5 ± 0.6	1.7 ± 0.8	1.1 ± 0.3	1.1 ± 0.3	1.6 ± 0.7	1.7 ± 0.8

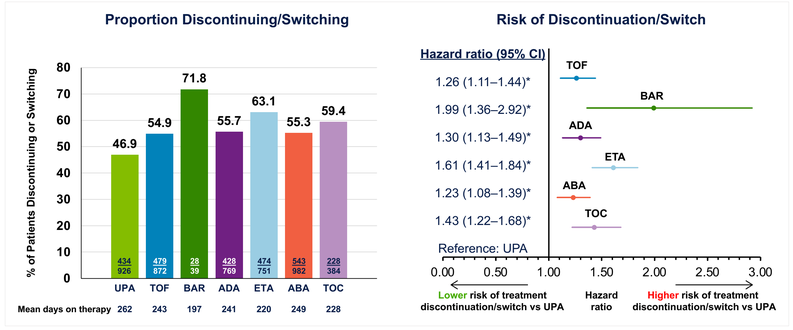
ABA, abatacept; ADA, adalimumab; BAR, baricitinib; ETA, etanercept; TNFi, TNF inhibitor; TOC, tocilizumab; TOF, tofacitinib; UPA, upadacitinib.

Figure 2. Adherence (PDC ≥ 80%) at 1 Year Among TNFi-Experienced Patients With RA Initiating Advanced Therapies



ABA, abatacept; ADA, adalimumab; BAR, baricitinib; ETA, etanercept; PDC, Proportion of Days Covered; TNFi, TNF inhibitor; TOC, tocilizumab; TOF, tofacitinib; UPA, upadacitinib.
*$P < .05$.

Figure 3. Treatment Discontinuation or Switch Rates Through 1 Year Among TNFi-Experienced Patients With RA Initiating Advanced Therapies



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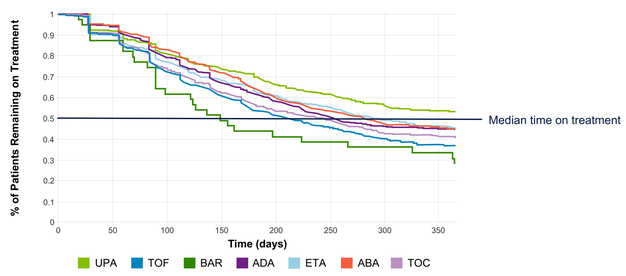
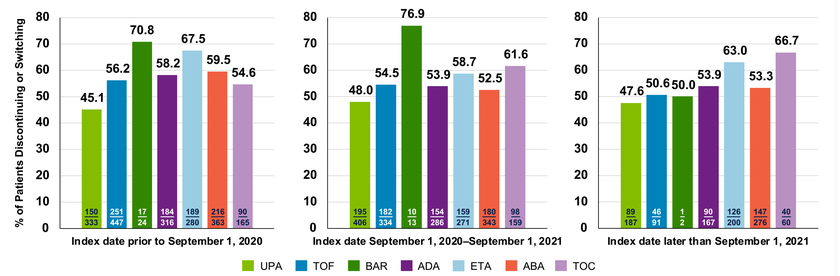
*$P < .05$.

Figure 4. Kaplan-Meier Curve for Probability of Remaining on Treatment[a] Through 1 Year Among TNFi-Experienced Patients With RA Initiating Advanced Therapies



ABA, abatacept; ADA, adalimumab; BAR, baricitinib; ETA, etanercept; TNFi, TNF inhibitor; TOC, tocilizumab; TOF, tofacitinib; UPA, upadacitinib.
[a]Patients who had not discontinued or switched treatment.

Figure 5. Treatment Discontinuation or Switch Rates Through 1 Year Stratified by Patients With Index Medication Follow-Up Occurring Before, After, or With Overlap of the FDA Safety Warning (September 1, 2021) Issued for TOF



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