Discontinuation Pattern of Glucocorticoid in Patients with Rheumatoid Arthritis Initiating Biologics or Targeted Synthetic DMARDs in Routine Care

Isabel Castrejon MD PhD*, Lucia Otero-Valera MSc, Jose María Álvaro-Gracia MD, Jerusalem Calvo MD, Cristina Campos MD, Alicia Garcia Dorta MD, Ana Pérez-Gómez MD, Dolores Ruiz Montesino MD, Fernando Sánchez-Alonso MSc on behalf of BIOBADASER

BACKGROUND

- Glucocorticoids (GC) have a rapid effect on symptoms, but chronic exposure is associated to adverse events.
- Both EULAR and ACR guidelines (1,2), recommend to use the lowest effective dose for <3 months as bridging therapy in rheumatoid arthritis (RA), however prednisone is used often for > 6 months in clinical practice.
- The greater availability of advanced therapies should help physicians to discontinue GC when low disease activity is achieved.

OBJECTIVES

To compare the GC-sparing effect of biologic and targeted synthetic DMARDs (b/tsDMARD) in RA in a real-life multicenter cohort and to identify predictors associated to GC discontinuation.

METHODS

- A total of 3,384 RA patients from a multicenter cohort initiating a first line treatment with a b/tsDMARD -TNFi, anti-IL6, anti-CD20, JAKi, and CTLA4-Ig- were identified. As TNFi was the larger group, a random sample was taken for comparison purposes.
- Concomitant GC use at treatment initiation was 56.4%.
- Patients with at least 1-year follow-up were included in the analysis. The main outcome was GC discontinuation after 1-year, assessed with a multivariate logistic regression. Baseline characteristics were analysed according to GC status.
- Kaplan-Meier estimates and Cox regression, adjusted for patient, disease and treatment characteristics, were used to evaluate GC discontinuation in patients with GC at baseline.

RESULTS

- A total of 557 RA patients included: 33% with TNFi, 15% with anti-IL6, 8% with anti-CD20, 25% with JAKi, and 109 with CTLA4-Ig.
- GC use decreased similarly in all treatment groups vs TNFi [odds ratio for discontinuation 0.95 (0.53 - 1.70) for anti-IL6, 0.81 (0.39 - 1.69) for anti-CD20, 1.07 (0.65 - 1.75) for JAKi, and 0.74 (0.41 - 1.31) for CTLA4-Ig].
- There were no differences at baseline by GC status after one year (Table).
- GC was reduced in a gradual manner over time (Figure 1), the proportion of patients with GC discontinuation was: 43.2% JAKi , 41.7% TNFi, 41.5% anti-IL6, 31.1% anti-CD20,, and 30.3% CTLA4-Ig.
- Adjusted hazard ratios were 1.09 (0.70-1.70) for anti-IL6, 1.07 (0.59-1.95) for anti-CD20, 1.31 (0.91-1.91) for JAKi, and 0.80 (0.51-1.28) for CTLA4-Ig.

	All patients N=557	Glucocorticoids N=340	No GC N=217
Age, years, mean (SD)	58.1 (12.1)	59.4 (11.4)	56.0 (13.0)
Sex, n (%) female	427 (76.7)	258 (75.9)	169 (77.9)
Caucasian, n (%)	412 (74.0)	246 (72.3)	166 (76.5)
Current smoker, n (%)	113 (20.3)	66 (19.4)	47 (21.7)
Obesity, n (%)	132 (23.7)	93 (27.3)	39 (18.0)
DM, n (%)	49 (8.8)	33 (9.7)	16 (7.4)
History of CVD, n (%)	76 (13.6)	49 (14.4)	27 (12.4)
Duration of RA, years	7.7 (7.8)	7.7 (7.7)	7.7 (8.1)
Baseline GC use >15mg, n (%)	26 (4.7)	16 (4.7)	10 (4.6)
DAS28-ESR, mean (SD)	4.7 (1.3)	4.8 (1.4)	4.6 (1.2)
Drug, n (%)			
TNFi	182 (32.7)	106 (31.2)	76 (35.0)
Anti-Il6	82 (14.7)	48 (14.1)	34 (15.7)
Anti-CD20	45 (8.1)	31 (9.1)	14 (6.4)
JAKi	139 (25.0)	79 (23.2)	60 (27.6)
CTLA4-Ig	109 (19.6)	76 (22.3)	33 (15.2)
Concomitant MTX, n (%)	268 (48.1)	166 (48.8)	102 (47.0)

Bibliography: 1. Smolen JS, et al. Ann Rheum Dis 2023;82:3–18. 2. Fraenkel, L. et al Arthritis Care & Research 2021; 73: 924–939

Figure: Survival curves of GC discontinuation across treatment

Kaplan-Meier survival estimates

Legend: TNFi, Anti CD20, CTLA4-Ig, Anti IL6, JAKi
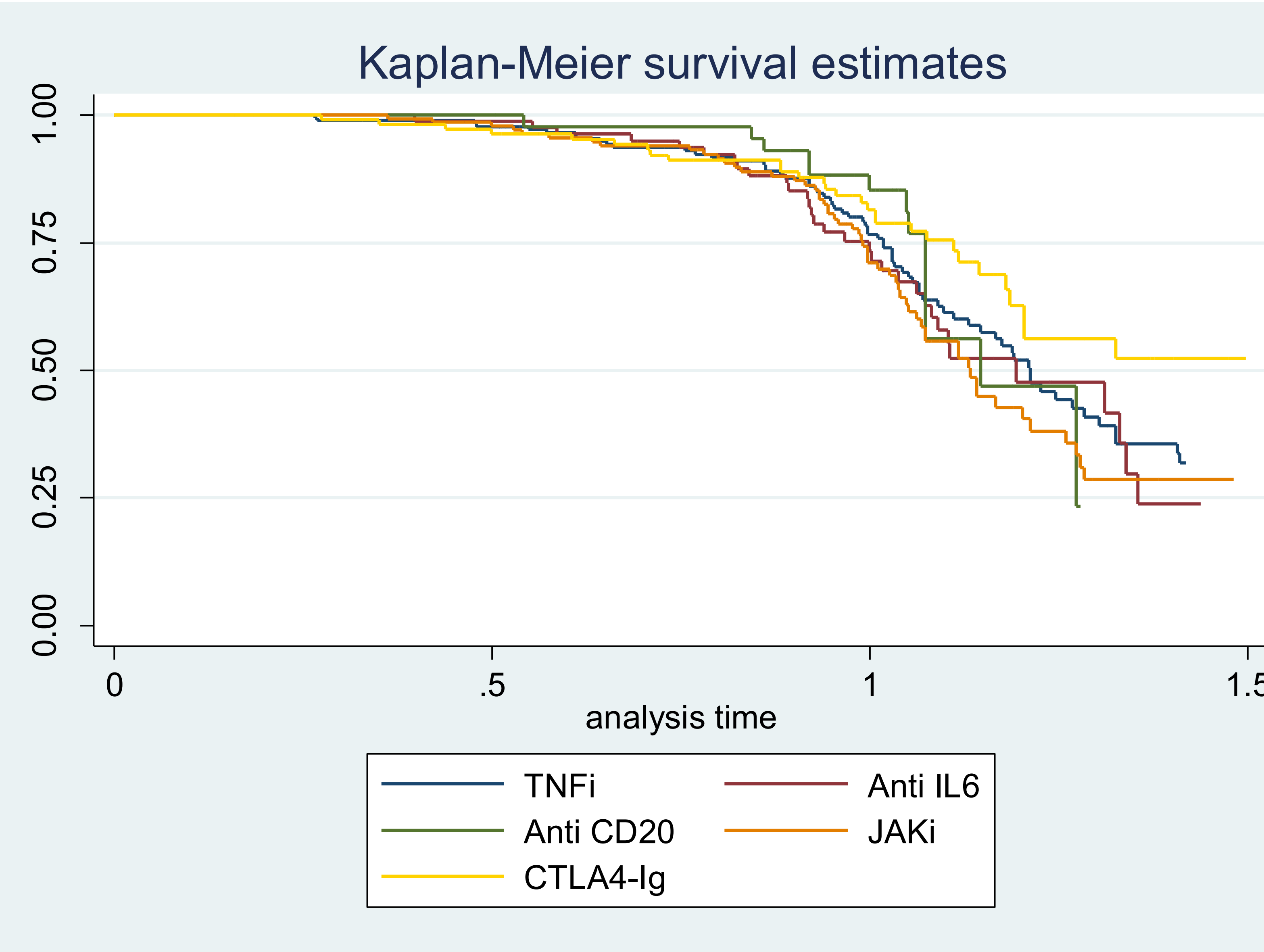
CONCLUSIONS

- Our data showed that GC were frequently prescribed when initiating b/tsDMARDs (56%), and still used after 1-year follow-up in many patients.
- Only between 30% with CTLA4-Ig4 and 43% with JAKi patients discontinued GC after 1-year follow-up in our cohort.
- We did not identify any predictor of discontinuation at baseline.

Correspondence: isabel.castrejon@salud.madrid.org

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