

## SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article at the publisher's website.

### SUPPLEMENTARY APPENDIX

**Supplementary Table S1.** Demographics and clinical characteristics between the 207 included patients and 128 excluded patients.

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**Supplementary Figure S2.** Kaplan-Meier curve with cumulative probability of glucocorticoids discontinuation in RA patients at initial visit before or after 2014.

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**Supplementary Figure S5.** Kaplan-Meier curve with cumulative probability of glucocorticoids discontinuation in DMARD-naïve RA patients with disease course less than or more than 1 years.

**Supplementary Figure S6.** Comparisons of the percentage of remission, low, moderate and high disease activity measured by DAS28, SDAI, CDAI between the points of glucocorticoids initiation and discontinuation in 124 RA patients who discontinued glucocorticoids.

**Supplementary Table S1.** Demographics and clinical characteristics between the 207 included patients and 128 excluded patients

Characteristics of patients	Inclusion patients (n=207)	Exclusion patients (n=128)
<b>Basic characteristics</b>		
Age at GC initiation (years)	55.9±14.5	54.4±13.2
Female, % (n)	82.6% (171)	80.4 (103)
Disease duration (months)	24.0 (8.5-96.0)	24.0 (10.0-84.0)
DMARD-naïve	53.1% (110)	50.0% (64)
RF positive, % (n)	73.2% (55/205)	75.6% (95/126)
Anti-CCP positive, % (n)	79.5% (151/190)	81.2% (97/119)
<b>Baseline disease activity measures</b>		
TJC28	4 (2-10)	4 (1-10)
SJC28	3 (1-5)	3 (0-6)
PGA, 0-10cm	5 (3-6)	5 (3-7)
EGA, 0-10cm	4 (2-6)	4 (3-6)
ESR, mm/h	38 (17-60)	34 (18-54)
CRP, mg/dl	1.30 (0.47-3.74)	1.39 (0.41-3.26)
DAS28-ESR	4.76 (3.69-5.96)	4.52 (3.30-6.08)
SDAI	18.7 (10.5-32.4)	17.8 (8.5-33.5)
CDAI	16.0 (9.0-29.0)	16.0 (8.0-29.8)
<b>Initial therapy paradigm</b>		
MTX, % (n)	75.4% (156)	78.9% (101)
LEF, % (n)	53.1% (110)	54.0% (69)
HCQ, % (n)	55.6% (115)	50.0% (64)
SSZ, % (n)	9.2% (19)	9.2% (12)
TII, % (n)	13.0% (27)	15.8% (20)
NSAIDs, % (n)	13.0% (27)	11.8% (15)
DMARD combination, % (n)	81.1% (163)	78.9% (101)
PSL equivalent dose, mg/d	10.0 (5.0-10.0)	10.0 (5.0-12.5)

Values are presented as mean (S.D.) or median (IQR), as applicable. SD: standard deviation, IQR: interquartile ranges.

RF: rheumatoid factor; Anti-CCP: anti-cyclic citrullinated peptides; TJC: tender joint count; SJC: swollen joint count; PGA: patient's global assessment; EGA: evaluator's global assessment; ESR: erythrocyte sedimentation rate; CRP: C-reactive protein; DAS28: disease activity score based on 28-joint count; SDAI: simplified disease activity index; CDAI: clinical disease activity index; DMARDs: disease modifying antirheumatic drugs; MTX: methotrexate; LEF: leflunomide; HCQ: hydroxychloroquine; SSZ: sulfasalazine; PSL: prednisolone.

**Supplementary Table S2.** The disease activity at baseline and month 3 in 207 included patients and 76 excluded patients due to less than 1-year follow-up or 3 visits

	Inclusion patients (n=207)		Patients excluded due to less than 1-year follow-up or 3 visits (n=76)	
	Available cases	DAS28 (SDAI/CDAI)	Available cases	DAS28 (SDAI/CDAI)
Baseline	207	4.76 (18.7/16.0)	76	4.64 (17.4/15.0)
Month 3	189	2.99 (7.10/6.00)	58	3.05 (6.87/6.00)

**Supplementary Table S3.** The rate of glucocorticoids discontinuation stratified by follow-up duration

Follow-up duration	No. patients	Discontinuation rate	P value
1-2 years	43	51.16%	0.112
2-3 years	43	53.49%	
3-4 years	35	62.86%	
4-5 years	22	81.82%	
>5 years	48	66.67%	

**Supplementary Table S4.** The median time to glucocorticoids discontinuation stratified by year of initial visit before or after 2014

Year of initial visit	No. patients	Discontinuation rate	The median (IQR) time to GCs cessation	P value
Whole cohort				
2009-2013	115	56.52%	36.0 (27.2-44.8)	0.002
2014-2019	92	64.13%	20.0 (16.0-24.0)	
DMARD-naïve patients				
2009-2013	58	58.62%	38.0 (20.9-55.1)	0.008
2014-2019	52	67.31%	18.0 (15.4-32.6)	
DMARD-experienced patients				
2009-2013	57	54.39%	36.0 (26.2-45.8)	0.168
2014-2019	40	60.00%	21.0 (11.6-30.4)	

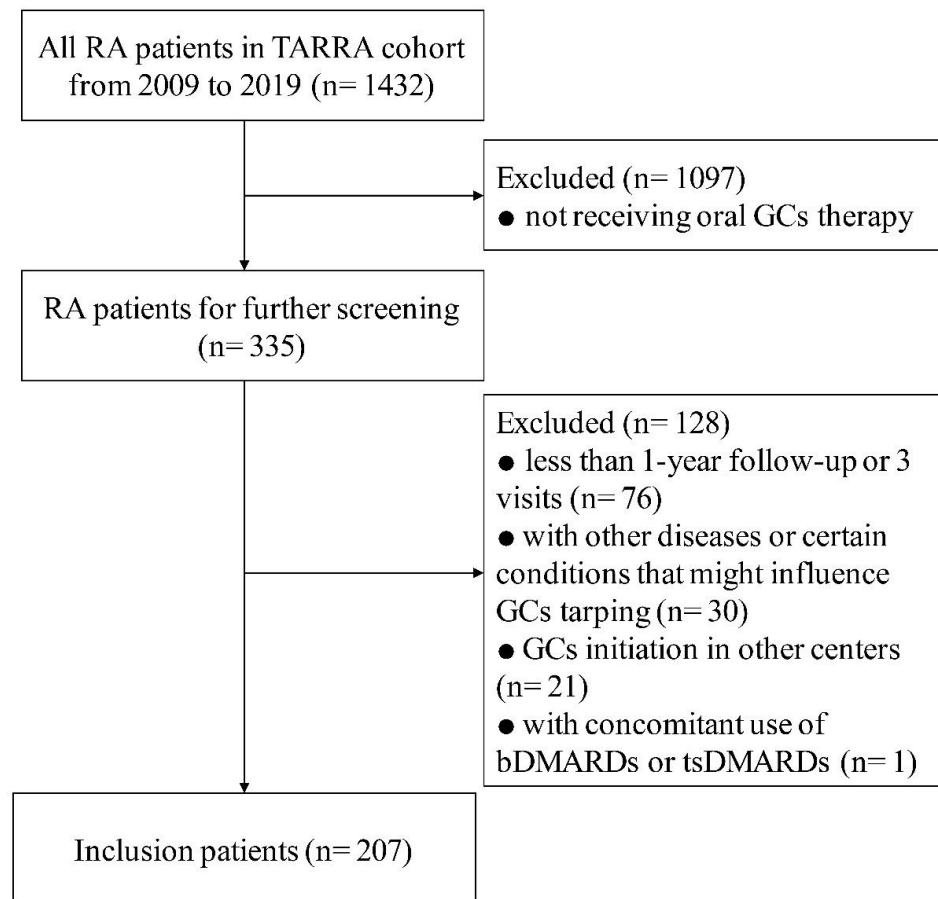
**Supplementary Table S5.** Demographics and clinical characteristics of DMARD-naïve and DMARD-experienced RA patients.

Characteristics of patients	DMARD-naïve (n=110)	DMARD-experienced (n=97)	P value
<b>Basic characteristics</b>			
Age at GC initiation (years)	56.8±14.9	55.1±14.0	0.756
Female, % (n)	77.3% (85)	88.7% (86)	0.031
Disease duration (months)	12.0 (4.0-28.8)	62.0 (24-150.0)	<0.0001
RF positive, % (n)	66.4% (73/110)	81.1% (77/95)	0.018
Anti-CCP positive, % (n)	73.1% (76/104)	87.2% (75/86)	0.016
<b>Baseline disease activity measures</b>			
TJC28	4.5 (2-10)	4 (1-8)	0.290
SJC28	3 (1-5)	3 (1-6)	0.854
PGA, 0-10cm	5 (3-6)	5 (3-7)	0.233
EGA, 0-10cm	4 (2-6)	4 (2-6)	0.918
ESR, mm/h	40 (18-60)	32 (17-61)	0.420
CRP, mg/dl	1.31 (0.47-4.13)	1.26 (0.48-3.16)	0.569
DAS28-ESR	4.80 (3.72-6.00)	4.75 (3.65-5.88)	0.569
SDAI	19.1 (10.4-34.8)	18.2 (10.7-31.2)	0.548
CDAI	16.5 (9.0-30.3)	16.0 (8.5-26.5)	0.688
<b>Initial therapy paradigm</b>			
MTX, % (n)	74.5% (82)	76.3% (74)	0.771
LEF, % (n)	50% (55)	56.7% (55)	0.335
HCQ, % (n)	58.2% (64)	52.6% (51)	0.418
SSZ, % (n)	3.64% (4)	15.5% (15)	0.003
TII, % (n)	10.0% (11)	16.5% (27)	0.166
NSAIDs, % (n)	11.8% (13)	14.4% (14)	0.577
DMARD combination, %	75.4% (83)	82.4% (80)	0.218
PSL equivalent dose, mg/d	10.0 (7.5-10.0)	10.0 (5.0-10.0)	0.405

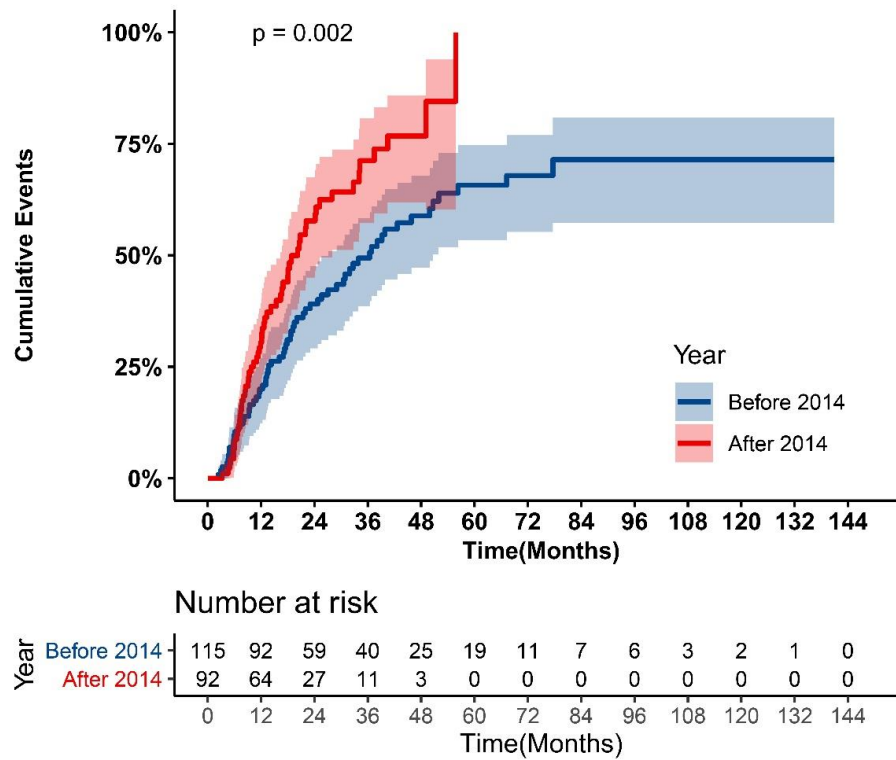
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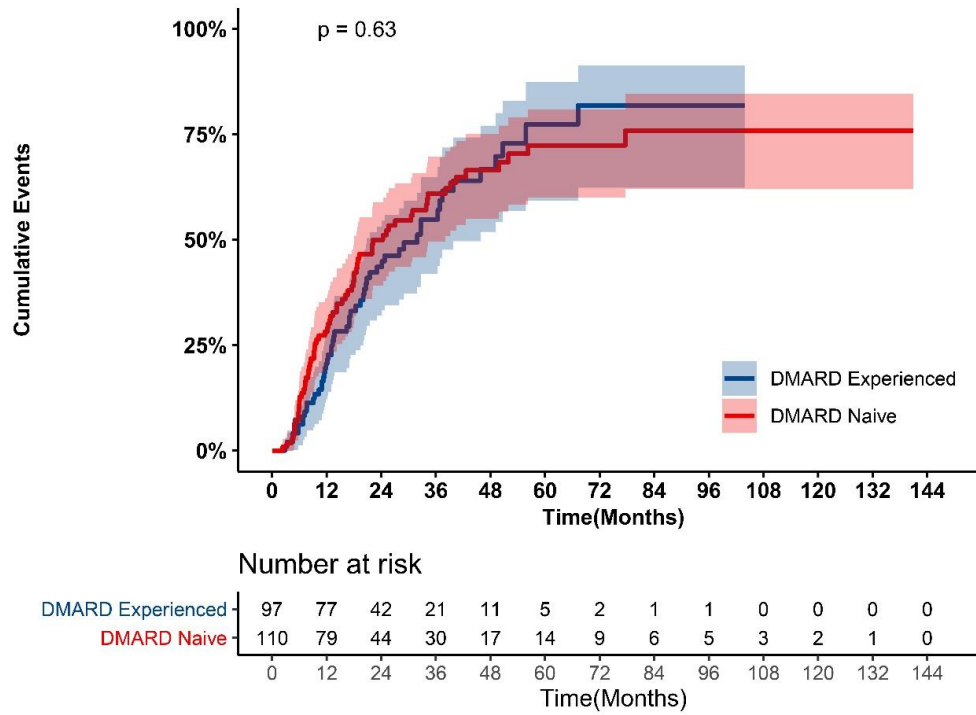
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**Supplementary Figure S1.** Study flow diagram

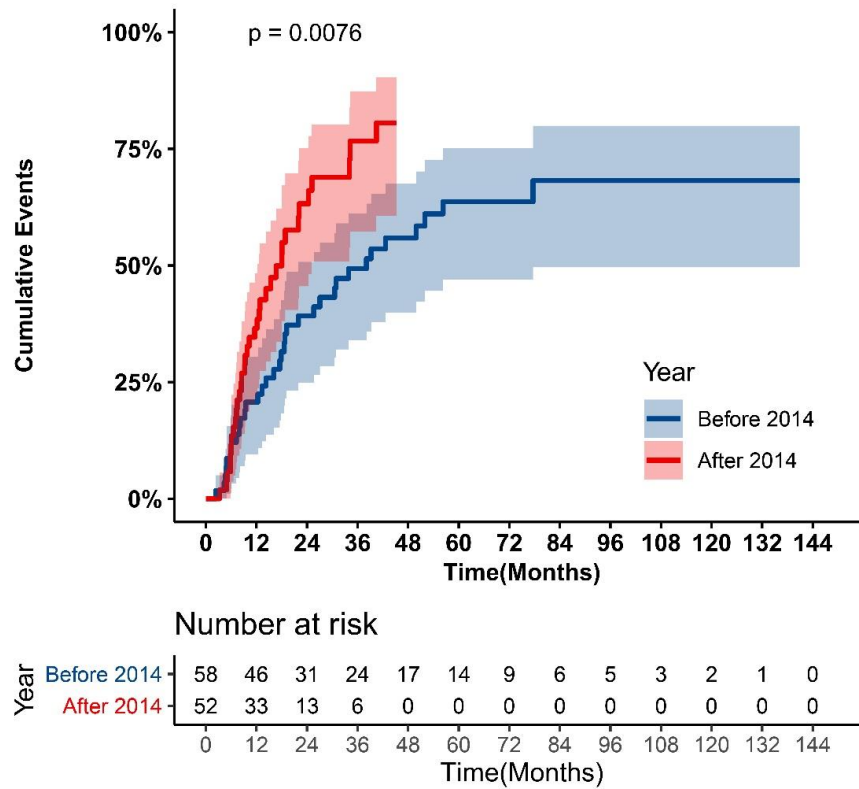


**Supplementary Figure S2.** Kaplan-Meier curve with cumulative probability of glucocorticoids discontinuation in RA patients at initial visit before or after 2014.

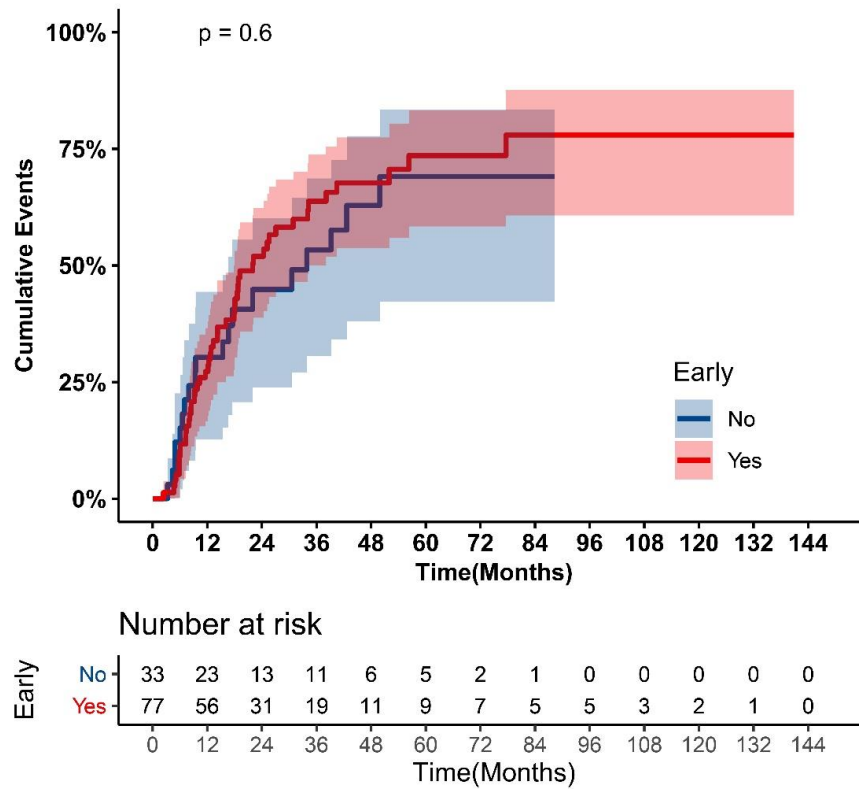


**Supplementary Figure S3.** Kaplan-Meier curve with cumulative probability of glucocorticoids discontinuation in DMARD-naïve and DMARD-experienced RA patients.

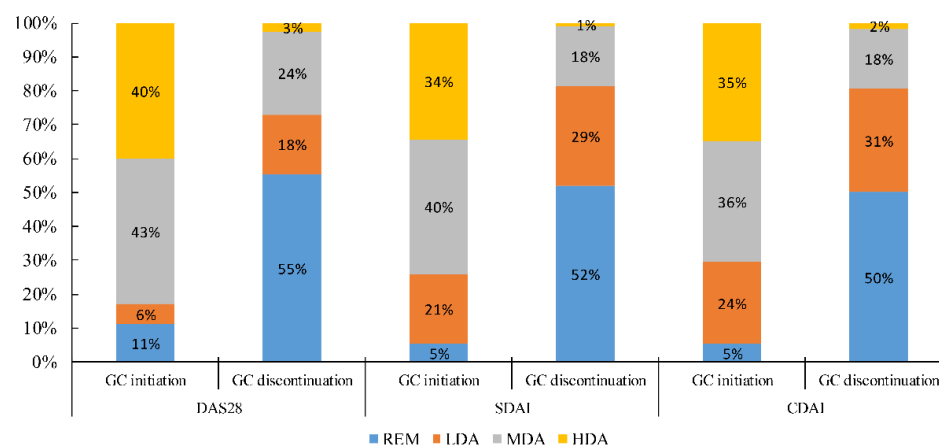




**Supplementary Figure S4.** Kaplan-Meier curve with cumulative probability of glucocorticoids discontinuation in DMARD-naïve RA patients at initial visit before or after 2014.



**Supplementary Figure S5.** Kaplan-Meier curve with cumulative probability of glucocorticoids discontinuation in DMARD-naïve RA patients with disease course less than or more than 1 years.



**Supplementary Figure S6.** Comparisons of the percentage of remission, low, moderate and high disease activity measured by DAS28, SDAI, CDAI between the points of glucocorticoids initiation and discontinuation in 124 RA patients who discontinued glucocorticoids.