

Supplementary Table 1. Medications for rheumatoid arthritis recorded by UK Biobank participants

Steroids	Synthetic DMARDs	Biologic DMARDs
corticosteroids depomedrone triamcinilone methylprednisolone prednisolone prednisone (<i>also listed in UK Biobank as Deltacortril enteric; Deltastab; Precortisyl; Prednesola</i>)	Auranofin (<i>also listed in UK Biobank as Ridaura</i>) Azathioprine (<i>also listed in UK Biobank as Imuran</i>) hydroxychloroquine (<i>also listed in UK Biobank as Plaquenil</i>) leflunomide (<i>also listed in UK Biobank as Arava</i>) methotrexate methotrexate injections myocrisin penicillamine sulfasalazine (<i>also listed in UK Biobank as Sulazine; salazopyrin; sulphasalazine</i>)	abatacept adalimumab (<i>also listed in UK Biobank as Humira injection solution</i>) certolizumab etanercept golimumab infliximab rituximab tocilizumab

Supplementary Table 2. Prevalence of rheumatoid arthritis by sex and age

		No rheumatoid arthritis N (%)	Treated rheumatoid arthritis N (%)	Rheumatoid arthritis: all N (%)
Male	0-50 years	53,028 (99.64)	84 (0.16)	193 (0.36)
	51-65 years	127,572 (99.25)	433 (0.34)	967 (0.75)
	≥65 years	46,876 (98.85)	271 (0.57)	546 (1.15)
	All ages	227,476 (99.26)	788 (0.34)	1,706 (0.74)
Female	0-50 years	64,213 (99.25)	237 (0.37)	482 (0.75)
	51-65 years	157,699 (98.46)	1,283 (0.80)	2,468 (1.54)
	≥65 years	47,604 (97.94)	541 (1.11)	1,001 (2.06)
	All ages	269,516 (98.56)	2,061 (0.75)	3,951 (1.44)
Both sexes	0-50 years	117,241 (99.43)	321 (0.27)	675 (0.57)
	51-65 years	285,271 (98.81)	1,716 (0.60)	3,435 (1.19)
	≥65 years	94,480 (98.39)	812 (0.85)	1,547 (1.61)
	All ages	496,992 (98.87)	2,849 (0.57)	5,657 (1.13)

Supplementary Table 3. Self-reported Non-steroidal anti-inflammatory drug (NSAID) and COX-2 inhibitor usage.

		No rheumatoid arthritis N (%)	Treated rheumatoid arthritis N (%)	P-value	Rheumatoid arthritis: all N (%)	P-value
NSAID use	No	433,325 (87.19)	2,383 (83.64)	<0.001	4,630 (81.85)	<0.001
	Yes	63,667 (12.81)	4766 (16.36)		1,027 (18.15)	
COX-2 inhibitor use	No	496,197 (99.84)	2,751 (96.56)	<0.001	5,514 (97.47)	<0.001
	Yes	795 (0.16)	98 (3.44)		143 (2.53)	

Types of non-steroidal anti-inflammatory drugs (NSAIDs) used included Ibuprofen, ibuprofen plus codeine phosphate, and Naproxen. Types of COX-2 inhibitors examined included Parecoxib, Etoricoxib, Valdecoxib, Rofecoxib and Celecoxib.