

eTable 1. International Classification of Diseases (ICD) codes used to exclude controls with rheumatic diseases

Autoimmune Disease	ICD-9	ICD-10
ANCA-associated vasculitis	446.0, 446.4	M31.30, M30.1, M31.31, M31.7
Ankylosing spondylitis	720	M45.x, M08.1
Antiphospholipid syndrome	-	D68.61
Dermatomyositis/polymyositis	710.3, 710.4	M33.x
Giant cell arteritis	446.5, 446.7	M31.5, M31.6
Mixed connective tissue disease	710.8, 710.9	M35.1, M35.8, M35.9
Polymyalgia rheumatica	725	M31.5, M35.3
Psoriasis or psoriatic arthritis	696.0-2, 696.8	L40.x
Rheumatoid arthritis	714.x	M05.x, M06.x, M08.0, M08.2
Sjögren's syndrome	710.2	M35.0
Systemic lupus erythematosus	710	M32.x
Systemic sclerosis	701.0, 710.1	L94.0, M34.x

ANCA = antineutrophil cytoplasmic antibody

eTable 2. Association between preceding sinusitis and incident rheumatic disease, including all individuals with at least 3 years EHR history

Rheumatic Disease (n)	Adjusted OR^a for Rheumatic Disease by Exposure		
	Any Sinusitis (n=7248)	Acute Sinusitis (n=6754)	Chronic Sinusitis (n=6731)
Any rheumatic disease (n=1,812)	1.4 (1.2,1.7)	1.4 (1.1,1.7)	1.6 (1.3,1.9)
Rheumatoid arthritis (n=731)	1.2 (0.9,1.6)	1.2 (0.9,1.6)	1.3 (0.9,1.8)
Seropositive (n=484)	1.1 (0.8,1.6)	1.0 (0.7,1.5)	1.2 (0.8,1.9)
Seronegative (n=245)	1.4 (0.9,2.2)	1.7 (1.0,2.9)	1.3 (0.7,2.3)
Spondyloarthritis (n=118)	1.3 (0.7,2.5)	1.5 (0.7,3.0)	1.3 (0.6,2.9)
Ankylosing spondylitis (n=26) ^b	2.4 (0.6,9.2)	2.2 (0.5,9.1)	8.6 (0.9,79)
Psoriatic arthritis (n=92)	1.1 (0.5,2.3)	1.3 (0.6,3.0)	0.7 (0.3,2.0)
Systemic autoimmune rheumatic disease (n=218)	2.3 (1.5,3.6)	2.0 (1.1,3.5)	2.7 (1.6,4.6)
Antiphospholipid syndrome (n=26) ^b	7.0 (1.8,27)	N/A	6.0 (1.5,24)
Sjögren's syndrome (n=82)	2.4 (1.2,5.1)	2.4 (1.0,5.7)	2.5 (0.9,6.6)
Systemic lupus erythematosus (n=49) ^b	0.7 (0.2,2.1)	0.2 (0.0,1.8)	1.3 (0.4,4.5)
Systemic sclerosis (n=31) ^b	1.4 (0.4,5.5)	1.2 (0.3,5.5)	1.4 (0.3,6.0)
Vasculitis (n=745)	1.4 (1.1,1.9)	1.4 (1.0,2.0)	1.6 (1.1,2.2)
ANCA-associated vasculitis (n=41) ^b	1.5 (0.5,4.4)	1.6 (0.4,5.9)	2.1 (0.6,6.9)
Giant cell arteritis (n=81)	1.3 (0.5,3.3)	1.3 (0.4,4.6)	1.3 (0.4,4.5)
Polymyalgia rheumatica (n=623)	1.4 (1.1,2.0)	1.4 (0.9,2.1)	1.6 (1.1,2.3)

ANCA = antineutrophil cytoplasmic antibody, CI = confidence interval, N/A = not applicable due to insufficient exposures, OR = odds ratio

^aReference group was individuals with no sinusitis codes prior to index date. Adjusting for age, sex, EHR history, race and ethnicity, body mass index, smoking status. Bold values were statistically significant.^bUnadjusted conditional logistic regression due to small sample size