

Cohort	NOAR	UKRAG	BRAGGS	NR
Disease	1987 ACR RA	1987 ACR RA	1987 ACR RA	1987 ACR RA
Total N patients	1741	866	2912	589
% female	68	65	74	80
Age (IQR)	56 (46;67)	57 (49;67)	47 (36;56)	37 (29;46)
N CCPneg	1004	313	612	111
N CCPpos	737	553	2300	478
% CCP pos	42	64	79	81
% RF pos	61	65	76	85
% erosive patients	59	52	55	81

**Supplementary table 1:** Summary of cohort characteristics.

NOAR: Norfolk Arthritis Register. UKRAG: UK RA Genetics Consortium. BRAGGS: Biologics in RA Genetics and Genomics Study Syndicate. NR: National Repository. 1987 ACR RA: satisfying the 1987 ACR classification criteria for rheumatoid arthritis. Age: median patient age at disease onset, with interquartile range (IQR). N: number. RF: rheumatoid factor. For samples tested at several occasions over time, the RF or anti-CCP status was defined as positive if at least one of the tests was positive (“ever positivity”). Disease duration at the time of the last x-ray differs between patients and cohorts. The fact that disease severity and therefore the percentage of anti-CCP positive patients differs between cohorts does not represent a limitation in a case control study of susceptibility markers.

	Shared epitope			PTPN22		
	N pat	OR (95% CI)	p-value	N pat	OR (95% CI)	p-value
Control	1352	-	-	12398	-	-
CCP- RF-	709	1.17 (1.01 ; 1.34)	0.034	1042	1.21 (1.05 ; 1.39 )	0.008
CCP- RF+	586	1.39 (1.20 ; 1.61)	1.0E-05	774	1.20 (1.02 ; 1.41)	0.032
CCP+ RF-	169	3.30 (2.61 ; 4.19)	3.6E-23	511	2.00 (1.69 ; 2.36)	5.1E-16
CCP+ RF+	2175	4.16 (3.70 ; 4.68)	5.8E-124	3107	1.87 (1.73 ; 2.03)	3.1E-53

**Supplementary table 2:** Stratified analysis by serotypes based on two auto-antibodies

CCP: anti-CCP. RF: rheumatoid factor. For samples tested at several occasions over time, the RF or anti-CCP status was defined as positive if at least one of the tests was positive (“ever positivity”). N pat: number of patients. CI: confidence interval.