

Supplementary Table 1. Assessment of risk factors: definitions and cut-off values

Risk factor	Definition	Cut-off values
Age	In years, at the moment of inclusion	
Gender	Male/female	
Body mass index (BMI)	Body weight and height were measured by physical examination and BMI (kg/m ²) was calculated. Because of the small number of participants with underweight (n=353, 0.9%), these participants were included in the normal weight group.	According to the WHO criteria [1]: - Normal weight (BMI <25 kg/m ²) - Overweight (BMI ≥25 to <30 kg/m ²) - Obesity (BMI ≥30 kg/m ²)
Tobacco use	Tobacco usage was expressed in pack years; one pack year was defined as 20 cigarettes per day for one year [2]. A cigar equaled 5 cigarettes, a cigarillo equaled 2 cigarettes and 50 g pipe tobacco equaled 65 cigarettes. Smoking status was examined by dividing participants in groups of current, former and never smokers. A never smoker was defined as never having smoked for a full year.	Categories [3]: - 0 to 10 pack years - >10 to 20 pack years - >20 pack years
Alcohol intake	Alcohol intake was calculated in g/day by using the number of days a participant had used alcohol within the past month and the number of drinks on the average day of using alcohol within the past month.	Categories [4]: - 0 to 5 g/day - 5 to <10 g/day - 10 g/day or more
Fish intake	Number of days on which fish was consumed in the past month times the average number of servings on such a day.	
Sugar-sweetened soft drink intake	Number of days on which sugar-sweetened soft drinks were consumed in the past month times the average number of servings on such a day.	
Periodontitis	Periodontitis was assessed by asking if periodontitis had ever been diagnosed by a dentist.	
Joint complaints	Joint complaints were assessed using four questions asking for regular (more than a few times a week) pain and/or stiffness in the joints of hands and/or feet. Analysis was performed for the presence of either pain and/or stiffness in hands and/or feet and for both pain and stiffness in hands and/or feet.	
FDR with rheumatism	FDR with rheumatism was defined by having at least one first-degree relative with rheumatism.	
Menopausal status and hormone use	Menopausal status was assessed only in females ≥ 50 years old.	Categories: - Premenopausal - Postmenopausal and no

		hormone use - Postmenopausal and hormone use
Regular menses	Females were asked to say whether their menses was regular or not. Regular menses was assessed only in females between the ages of 18 and 50.	
Early menarche	Early menarche was defined as entering menarche at age 10 or under.	

1 BMI classification. Available at: http://apps.who.int/bmi/index.jsp?introPage=intro_3.html. Accessed 03/24, 2015.

2 NCI Dictionary of Cancer Terms. Available at: <http://www.cancer.gov/dictionary?Cdrid=306510>. Accessed 03/24, 2015.

3 Kallberg H, Ding B, Padyukov L, et al. Smoking is a major preventable risk factor for rheumatoid arthritis: estimations of risks after various exposures to cigarette smoke. *Ann Rheum Dis* 2011;70:508-11.

4 Sparks JA, Chen CY, Hiraki LT, et al. Contributions of familial rheumatoid arthritis or lupus and environmental factors to risk of rheumatoid arthritis in women: a prospective cohort study. *Arthritis Care Res (Hoboken)* 2014;66:1438-46.

Supplementary Table 2. Medication use included in the definition of defined RA

Traditional DMARDs	Biological DMARDs	NSAIDs	Steroids
Hydrochloroquine	Etanercept	Salicylates - Carbasalate calcium - Acetylsalicylic acid	Prednisone
Sulfasalazine	Adalimumab	Acetic acid derivates - Diclofenac - Aceclofenac - Indomethacin	Methylprednisolone
Methotrexate	Infliximab	Proprionic acid derivatives - Naproxen - Ibuprofen - Ketoprofen - Flurbiprofen - Tiaprofenic acid	Cortisone
Leflunomide	Golimumab	Pyrazolones - Phenylbutazone	
Azathioprine	Rituximab	Coxibs - Celecoxib - Etoricoxib - Nabumetone	
Mercaptopurine	Tocilizumab		
Ciclosporine	Abatacept		
Cyclophosphamide	Ustekinumab		
Gold	Anakinra		
Mycophenolate mofetil			
Penicillamine			

DMARDs: disease-modifying anti-rheumatic drugs; NSAIDs: non-steroidal anti-inflammatory drugs.

In the questionnaire, patients filled out the name of their medication use and the reason for prescription. Medication was then looked up using indexing in SPSS. Synonyms available for the medication named in table 1 were used as well.

Supplementary Table 3. Baseline characteristics: participants without RA, self-reported RA participants and defined RA participants.

	No RA (n=39,298)	Self-reported RA (n=838)	Defined RA (n=138)
Age (years)	44 (34-51)	51 (45-59)	52 (47-58)
Gender (female)	58%	63%	65%
BMI (kg/m²)	25 (23-28)	27 (24-29)	27 (24-29)
Obesity	15%	22%	22%
Smoking (pack years)	0 (0-8)	2 (0-15)	5 (0-18)
Smoking status			
Never smoker	49%	39%	34%
Former smoker	30%	40%	49%
Current smoker	21%	22%	17%
Alcohol intake (g/day)	3 (0-11)	3 (0-9)	4 (0-11)
Fish intake (servings/month)	5 (2-9)	5 (2-9)	5 (2-9)
Sugar-sweetened soft drink intake (glasses/month)	6 (0-22)	3 (0-17)	5 (0-17)
Periodontitis (self-reported)	12%	11%	14%
Joint complaints: pain and/or stiffness in hands and/or feet	20%	71%	82%
Joint complaints: both pain and stiffness in hands and/or feet	11%	61%	73%
FDR with rheumatism	14%	25%	25%
<i>In females (n=23,256)</i>			
Nulliparity	27%	14%	18%
Menopausal status, categories			
Premenopausal	63%	64%	60%
Postmenopausal and hormone use	4%	3%	0%
Postmenopausal and no hormone use	34%	33%	40%
Regular menses	78%	62%	79%
Age of menarche ≤10	2%	3%	1%

Data are presented as median (interquartile range) for continuous variables and percentages for categorical variables.