

Supplementary Table S1. Descriptive variables (sociodemographic, disease related and laboratory findings) of the PEARL registry population related to fulfilling or not the ACR/EULAR 2010 criteria for RA.

2010 ACR-EULAR criteria	Rheumatoid arthritis	Undifferentiated arthritis	Total	p-value
n (%)	384 (57.31)	286 (42.69)	670 (100)	-
Age at onset (years) median [IQR]	56.71 [44.95-68.39]	52.32 [40.43-65.2]	54.37 [42.79-66.83]	<0.01
Sex (female/male) (%)	81.51/18.49	74.48/25.52	78.51/21.49	0.028
Smoking habit n (%)				
Non smoker	192 (52.17)	147 (52.88)	339 (52.48)	0.98
Ever smoker	176 (47.83)	131 (47.12)	307 (47.52)	
Time to disease (mos.) Me [IQR]	4.97 [2.89 - 8.03]	4.52 [2.2 - 8.13]	4.7 [2.63 - 8.13]	0.12
DAS28 mean (SD)	4.9 (1.39)	3.51 (1.28)	4.29 (1.51)	0.14
HUPI median [IQR]	8.5 [6 - 10.5]	5 [2.5 - 7]	7 [4 - 9.5]	<0.01
HAQ median [IQR]	1.125 [0.625 - 1.75]	0.75 [0.25 - 1]	0.875 [0.375 - 1.625]	<0.01
VAS pain (mm) median [IQR]	50 [26 - 66]	35 [15.5 - 52]	44.5 [21 - 62]	<0.01
RF + n (%)	264 (68.75)	50 (17.48)	314 (46.87)	<0.01
ACPA + n (%)	232 (63.91)	32 (11.39)	264 (40.99)	<0.01
Shared epitope (%)				
No copies	41.54	52.49	45.88	0.012
1 copy	45.1	40.27	43.19	
2 copies	13.35	7.24	10.93	
CRP (mg/dl) median [IQR]	0.8 [0.3 - 2.1]	0.38 [0.1 - 0.9]	0.6 [0.2-1.5]	<0.01

n: number; IQR: interquartile range; mos: months; DAS28: Disease Activity Score based on 28 joints count; SD: standard deviation;

HUPI: Hospital Universitario Princesa Index. HAQ: Health Assessment Questionnaire; VAS: Visual Analogue Scale; RF +: rheumatoid factor positive; ACPA+: anti-citrullinated peptide antibodies positive; CRP: C-reactive protein.

Supplementary Table S2. Descriptive variables (sociodemographic, disease related and laboratory findings) of the PEARL registry population related to the BMI.

BMI (kg/m ²)	Low weight (<18.5)	Normal weight [18.5-25]	Overweight [25-30]	Obese (≥30)	Total	p-value
n (%)	13 (1.94)	266 (39.7)	255 (38.06)	136 (20.3)	670 (100)	-
Marital status n (%)						
Single	6 (46.15)	66 (24.91)	49 (19.29)	27 (19.85)	148 (22.16)	0.03
Married	5 (38.46)	147 (55.47)	148 (58.27)	84 (61.76)	384 (57.49)	
Divorced	0 (0)	33 (12.45)	21 (8.27)	9 (6.62)	63 (9.43)	
Widowed	2 (15.38)	19 (7.17)	36 (14.17)	16 (11.76)	73 (10.93)	
Education level n (%)						
No studies	0 (0)	6 (2.27)	14 (5.51)	15 (11.03)	35 (5.25)	<0.01
Primary school	2 (15.38)	54 (20.45)	82 (32.28)	48 (35.29)	186 (27.89)	
High school	6 (46.15)	82 (31.06)	97 (38.19)	40 (29.41)	225 (33.73)	
University studies	5 (38.46)	122 (46.21)	61 (24.02)	33 (24.26)	221 (33.13)	
TJC (no. 28) median [IQR]	5 [3 - 8]	3 [0-7]	2 [0-8]	5 [1-12]	3 [0 - 8]	<0.01
SJC (no. 28) median [IQR]	4 [2 - 9]	4 [1 - 7]	3 [1 - 7]	4 [1 - 7]	4 [1 - 8]	0.786
PGA (mm) median [IQR]	37 [23 - 60]	38 [19 - 57]	42 [25 - 54]	47 [31 - 61]	42 [23 - 56]	0.027
PhGA (mm) median [IQR]	37 [25 - 66]	34.5 [18 - 50]	34 [20 - 50]	35 [21.5 - 55]	34.5 [20 - 50]	0.65
RF (U/ml) median [IQR]	6 [0 - 10]	14.5 [0 - 50]	11 [0 - 59]	12 [0 - 69.5]	12 [0 - 54]	0.76
ACPA level n (%)						
Low level (<350 U/ml)	3 (60)	57 (45.97)	35 (39.33)	24 (52.17)	119 (45.08)	0.442
High level (≥350 U/ml)	2 (40)	67 (54.03)	54 (60.67)	22 (47.83)	145 (54.92)	
ACPA (U/ml) median [IQR]	7 [1 - 234]	26 [0 - 404.5]	8 [0 - 301]	6 [1 - 278]	9.5 [0 - 343]	0.18
ESR (mm/hr) median [IQR]	35 [14.5 - 63]	22 [13 - 37]	24 [14 - 38]	23 [14 - 42]	23 [14 - 38]	0.358
Use of statins n (%)	0 (0)	13 (5.12)	39 (16.32)	22 (17.60)	74 (11.75)	<0.01

n: number of patients; TJC (No. 28): tender joint count based on 28 joints; IQR: interquartile range; SJC (no. 28): swollen joint count based on 28 joints; PGA: Patient Global Assessment; PhGA: Physician Global Assessment; RF: rheumatoid factor; ACPA: anti-citrullinated peptide antibodies; ESR: erythrocyte sedimentation rate.

Supplementary Table S3. Multivariate analysis of variables associated with ACPA level in patients with early arthritis.

ACPA level			
MODEL 1 - BMI as a categorical variable		OR [CI 95%]	p-value
BMI	Normal weight	Ref.	-
	Low weight	0.75 [0.209 – 2.685]	0.659
	Overweight	0.778 [0.532 – 1.14]	0.199
	Obesity	0.664 [0.417 – 1.057]	0.085
Smoking habit & SE copies	Non smoker - 0 copies	Ref.	-
	Non smoker - 1 copy	1.479 [0.898 – 2.434]	0.123
	Non smoker - 2 copies	3.309 [1.597 – 6.856]	0.001
	Ever smoker - 0 copies	1.212 [0.709 – 2.071]	0.482
	Ever smoker - 1 copy	2.854 [1.709 – 4.768]	<0.001
	Ever smoker - 2 copies	8.204 [3.464 – 19.425]	<0.001
MODEL 2 - BMI as a continuous variable			
BMI		0.966 [0.932 – 1.001]	0.062
Smoking habit & SE copies	Non smoker - 0 copies	Ref.	-
	Non smoker - 1 copy	1.471 [0.896 – 2.42]	0.127
	Non smoker - 2 copies	3.318 [1.605 – 6.858]	0.001
	Ever smoker - 0 copies	1.183 [0.694 – 2.018]	0.535
	Ever smoker - 1 copy	2.859 [1.712 – 4.775]	<0.001
	Ever smoker - 2 copies	8.319 [3.524 – 19.625]	<0.001

ACPA: anti-citrulinated peptide antibodies; BMI: body mass index; OR: odds ratio; CI: confidence interval; SE: shared epitope.