

Supplementary table S1. Proportion of smokers and non-smokers in each country participating in the CERERRA collaboration.

	Czech Republic (N=169)	Denmark (N=317)	Norway (N=157)	Portugal (N=142)	Russia (N=1018)	Slovenia (N=122)	Sweden (N=98)	Switzerland (N=458)
Non- smokers	59.2%	68.1%	64.3%	89.4%	90.0%	79.5%	67.3%	72.1%
Smokers	40.8%	31.9%	35.7%	10.6%	10.0%	20.5%	32.7%	27.9%

Supplementary table S2. Baseline characteristics of patients stratified for smoking status in each register participating in the CERERRA collaboration.

	Czech Republic			Denmark			Norway		
	Non-smokers (100)	Smokers (69)	Diff between groups (p-value)	Non-smokers (216)	Smokers (101)	Diff between groups (p-value)	Non-smokers (101)	Smokers (56)	Diff between groups (p-value)
Age (mean±SD)	52.6±11.6 (100)	54.1±10.1 (69)	0.4	58.4±13.8 (216)	58.1±10.3 (101)	0.85	54.8±12.4 (101)	52.4±13.1	0.25
Sex (% female)	87% (100)	63.8% (69)	<0.0001	71.8% (216)	66.3% (101)	0.33	80.2% (101)	76.8% (56)	0.62
Disease Duration median (IQR)	10 (6-15) (100)	8 (5-13.5) (69)	0.09	11 (5-17) (204)	8 (4-16) (99)	0.05	12.9 (7.2-12.9) (101)	9.8 (5.6-13.6) (56)	0.13
RF (% positive)	61% (100)	72.5% (69)	0.12	80.6% (216)	85.1% (101)	0.32	80.2% (101)	85.7% (56)	0.39
ACPA (% positive)	74% (100)	84.1% (69)	0.12	93.5% (31)	92.9% (14)	0.93	80.8% (73)	81.6% (38)	0.92
RF and/or ACPA pos (%)	81% (100)	95.7% (69)	0.005	98.9% (189)	100% (90)	0.33	91.8% (98)	92.9% (56)	0.82
Baseline DAS28 (mean±SD)	6.1±1.0 (100)	6.0±1.0 (67)	0.23	4.7±1.6 (216)	4.5±1.6 (100)	0.33	5.6±1.3 (99)	5.3±1.5 (54)	0.23
Baseline HAQ (mean±SD)	1.5±0.6 (97)	1.4±0.6 (68)	0.15	1.5±0.7 (182)	1.4±0.7 (81)	0.56	N/A		
N. Prior csDMARDs (mean±SD)	3.6±1.6 (100)	2.8±1.3 (69)	0.001	3.2±1.8 (216)	2.9±1.5 (101)	0.07	3.3±1.7 (101)	2.9±1.3 (56)	0.10
N. Prior bDMARDs (median IQR)	1 (1-2) (100)	1 (1-2) (69)	0.69	2 (1-3) (216)	2 (1-3) (101)	0.19	2 (1-3) (101)	2 (1-3) (56)	0.53
Concomitant glucocorticoids	84% (100)	79.7% (69)	0.47	38 % (216)	32.7% (101)	0.36	78.2% (101)	67.9% (56)	0.15
- dose (mg) (median IQR)	N/A			7 (5-10) (82)	7.5 (5-13.5) (33)	0.21	5 (2.5-10) (101)	5 (0-10) (56)	0.60
Concomitant csDMARDs	86% (100)	91.3% (69)	0.29	76.4% (216)	75.2% (101)	0.82	76.2% (101)	87.5%	0.09

	Portugal			Russia			Slovenia		
	Non-smokers (127)	Smokers (15)	Diff between groups (p-value)	Non-smokers (916)	Smokers (102)	Diff between groups (p-value)	Non-smokers (97)	Smokers (25)	Diff between groups (p-value)
Age (mean±SD)	55.9±12.5 (127)	48.7±10.7 (15)	0.03	47.8±12.0 (913)	46.3±11.4 (102)	0.24	57.3±11.2 (96)	53.1±8.7 (25)	0.09
Sex (% female)	92.1% (127)	86.7% (15)	0.47	89.4% (916)	42.2% (102)	<0.0001	83.5% (97)	60% (25)	0.01
Disease Duration median (IQR)	12 (7-20) (124)	6 (4-13) (15)	0.01	9 (5-14) (911)	6 (3-10) (101)	<0.0001	12 (7.75-17.25) (94)	9 (4-12) (25)	0.03
RF (% positive)	77.2% (127)	80% (15)	0.80	79% (782)	86.4% (88)	0.10	88.7% (97)	84% (25)	0.53
ACPA (% positive)	70.9% (127)	80% (15)	0.46	85% (226)	81.1% (37)	0.55	69.1% (97)	92% (25)	0.02
RF and/or ACPA pos (%)	85% (127)	86.7% (15)	0.87	96.9% (668)	95.1% (82)	0.41	92.8% (97)	96% (25)	0.56
Baseline DAS28 (mean±SD)	5.7±1.4 (108)	5.0±1.9 (11)	0.13	6.4±1.0 (887)	6.3±1.2 (100)	0.29	6.1±1.1 (96)	6.1±1.0 (25)	0.95
Baseline HAQ (mean±SD)	1.8±0.6 (76)	1.5±0.6 (10)	0.08	1.9±0.7 (759)	1.9±0.7 (82)	0.80	1.3±0.7 (95)	1.3±0.6 (25)	0.73
N. Prior csDMARDs (mean±SD)	1.9±1.2 (127)	2.1±1.1 (15)	0.70	2.4±1.2 (911)	2.1±1.2 (102)	0.004	1.5±1.0 (97)	1.4±0.9 (25)	0.34
N. Prior bDMARDs (median IQR)	1 (1-2) (127)	1 (0-2) (15)	0.74	0 (0-1) (916)	0 (0-0.25) (102)	0.21	1 (1-2) (97)	1 (1-2) (25)	0.98
Concomitant glucocorticoids	82.7% (127)	86.7% (15)	0.70	61.5% (915)	59.8% (102)	0.73	57.7% (97)	44% (25)	0.22
- dose (mg) (median IQR)	7.5 (5-10) (105)	10 (6.25-15)	0.05	8 (5-10) (562)	10 (5.5-13.5)	0.15	5 (5-10) (56)	5 (5-7.5) (11)	0.43
Concomitant csDMARDs	82.7% (127)	80% (15)	0.80	81.1% (916)	84.3% (102)	0.43	87.6% (97)	84% (25)	0.63