

Supplementary material

Results of sensitivity analyses

In the first sensitivity analysis, where patients with missing data for IMF total were assigned a score of 40, the median (interquartile range (IQR)) for the total IMF score was 9 (4-18.5) at 1 year, 12 (4-40) at 2 years and 23 (8-40) at 5 years. Based on this, the underestimation of the median IMF score was 12.5 % at 1 year, 50 % at 2 years and 130 % at 5 years.

In the second sensitivity analysis, the last observation was carried forward for IMF total scores. In this analysis, the median (IQR) for the total IMF score was 9 (4-14.75) at 1 year, 9 (3-17) at 2 years and 11 (5-22.5) at 5 years. Based on this, the underestimation of the median IMF score was 12.5 % at 1 year and at 2 years, and 10 % at 5 years.

Supplementary table S1. Correlations* between lower extremity function and other disease parameters

	HAQ-DI	HAQ-DI-LE	CRP	DAS28	DAS
IMF at 1 year	r=0.38 p<0.001 (n=99)	r=0.45 p<0.001 (n=94)	r=0.25 p=0.015 (n=98)	r=0.24 p=0.02 (n=96)	r=0.18 p=0.08 (n=92)
IMF at 2 years	r=0.43 p<0.001 (n=88)	r=0.47 p<0.001 (n=84)	r=-0.011 p=0.92 (n=88)	r=0.17 p=0.11 (n=87)	r=0.03 p=0.80 (n=83)
IMF at 5 years	r= 0.58 p<0.001 (n=68)	r=0.57 p<0.001 (n=64)	r=0.47 p<0.001 (n=68)	r=0.41 p=0.001 (n=66)	r=0.33 p=0.008 (n=62)

*Spearman's rank test

IMF: Index of Muscle Function; HAQ-DI: Health Assessment Questionnaire Disability Index; HAQ-DI LE: HAQ-DI for the lower extremities; CRP: C-reactive protein

Supplementary table S2. Lower extremity function in early RA; by joint swelling. Index of Muscle Function; Median (IQR)

1 Year visit		Synovitis present	Synovitis absent	No synovitis in lower extremities (n=51)
	Knee joint (n=6)	11 (9.2-13.2)	7 (3-13)	9 (3-15)
	Ankle joint (n=26)	10 (3.8-13.2)	7 (3-12.5)	9 (3-15)
	Knee and/or ankle joint (n=28)	10 (4.5-13)	6 (3-13)	9 (3-15)
	MTP joint (n=34)	6 (2-9.5)*	10 (4-13.5)	9 (3-15)
2 Year visit		Synovitis present	Synovitis absent	No synovitis in lower extremities (n=59)
	Knee joint (n=4)	12 (2.5-17.8)	8 (3-14.8)	9 (3-15)
	Ankle joint (n=11)	8 (4-17)	8 (3-15)	9 (3-15)
	Knee and/or ankle joint (n=14)	10.5 (4-17.2)	8 (3-14.2)	9 (3-15)
	MTP joint (n=21)	5 (2-12.5)**	9 (4-17)	9 (3-15)
5 Year visit		Synovitis present	Synovitis absent	No synovitis in lower extremities (n=50)
	Knee joint (n=4)	15 (10.8-20)	9 (3.25-19.8)	8 (3-19.8)
	Ankle joint (n=10)	13.5 (8.8-23.5)***	9 (3-18.2)	8 (3-19.8)
	Knee and/or ankle joint (n=13)	13 (9-20.5)****	8 (3-19)	8 (3-19.8)
	MTP joint (n=8)	11.5 (0.2-25.5)	9.5 (5-19.8)	8 (3-19.8)

*p=0.07 vs Synovitis absent **p=0.06 vs Synovitis absent and p=0.12 vs No synovitis

p=0.12 vs Synovitis absent and p =0.12 vs No synovitis *p=0.09 vs Synovitis absent

Supplementary table S3. Lower extremity function in early RA; by joint tenderness. Index of Muscle Function; Median (IQR)

1 Year visit		Tenderness present	Tenderness absent	No tenderness in lower extremities (n=48)
	Knee joint (n=3)	9*	7 (3-12.5)	7.5 (3-11)
	Ankle joint (n=30)	6 (4-12.2)	7.5 (3-12.2)	7.5 (3-11)
	Knee and/or ankle joint (n=30)	6 (4-12.2)	7.5 (3-12.2)	7.5 (3-11)
	MTP joint (n=37)	8 (3-12.5)	7 (3-12)	7.5 (3-11)
2 Year visit		Tenderness present	Tenderness absent	No tenderness in lower extremities (n=47)
	Knee joint (n=4)	9 (2.5-24.5)	8 (3-15)	10 (3-17)
	Ankle joint (n=22)	8 (3-13)	9 (3-17)	10 (3-17)
	Knee and/or ankle joint (n=23)	8 (3-13)	8.5 (3-16.2)	10 (3-17)
	MTP joint (n=30)	8 (3-13)	9 (3-16)	10 (3-17)
5 Year visit		Tenderness present	Tenderness absent	No tenderness in lower extremities (n=41)
	Knee joint (n=3)	14*	9 (3-19.5)	9 (2.5-20)
	Ankle joint (n=10)	12.5 (6.8-20.2)	9.5 (3-19.8)	9 (2.5-20)
	Knee and/or ankle joint (n=13)	14 (7.5-20.5)	9 (3-19)	9 (2.5-20)
	MTP joint (n=16)	14 (3.5-19.8)	9 (3.2-20.2)	9 (2.5-20)

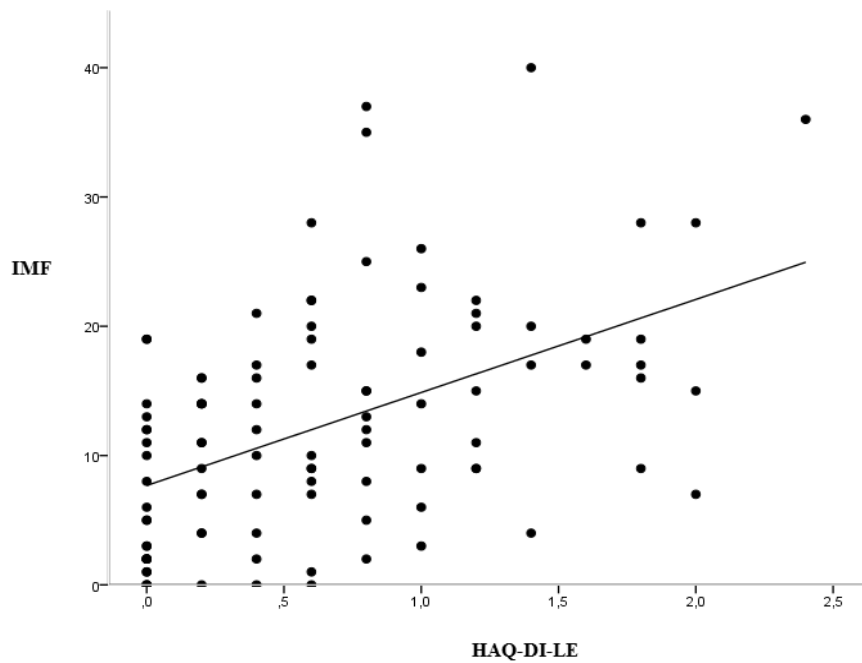
*n=3

Supplementary table S4. Relation between joint tenderness, age, sex and IMF total score at inclusion in the early RA cohort. Linear regression

	Crude		Multivariate*	
	β	95 % CI	β	95 % CI
Age (per year)	0.35	0.26 to 0.44	0.39	0.30 to 0.48
Female sex	1.00	-2.63 to 4.64	2.80	-0.02 to 5.62
Knee tenderness (n=11)	3.13	-2.40 to 8.67	1.42	-2.92 to 5.75
Ankle tenderness (n=35)	4.04	0.51 to 7.56	2.23	-0.80 to 5.25
MTP tenderness (n=48)	1.47	-1.93 to 4.87	2.33	-0.49 to 5.16

*Adjusted for all variables in the table

Supplementary figure S1.



Correlation between IMF total and HAQ-DI-LE at inclusion. $r=0.49$; $p<0.001$ (Spearman's rank test).

IMF: Index of Muscle Function; HAQ-DI-LE: Health Assessment Questionnaire Disability Index for the lower extremities