

Supplementary Table S4a. Comparisons of the two disease activity trajectory groups with minimal disease activity at baseline

Characteristics	Group 1 (MiDA-ID) n=168	Group 2 (MiDA-MDA) n=104	P value
Gender female, n (%)	101 (60.1)	76 (73.1)	0.03
Age at onset of symptoms (years), median (IQR)	5.4 (2.7-9.2)	5.2 (2.5-9.9)	0.84
Age at last study visit (years), median (IQR)	23.4 (20.5-26.5)	22.6 (20.0-27.0)	0.45
Time to first study visit (months), median (IQR)	7 (6-8)	6 (6-7.5)	0.26
Time to last study visit (years), median (IQR)	17.8 (17.1-18.7)	17.4 (16.5-18.5)	0.01
Full-time employed or student, n (%)	132 (78.5)	68 (65.4)	0.11
Transferred directly to adult rheum. care, n (%)	26 (15.5)	55 (52.9)	<0.0001
Transferred later to adult rheum. care, n (%)	20/156 (12.8)	23/80 (28.8)	0.003
ANA positive, n (%) *	39/150 (26.0)	43/94 (45.7)	0.001
HLA-B27 positive, n (%)	26/157 (16.5)	29/101 (28.7)	0.03
ILAR category at 18-year follow-up, n (%)			
Oligoarthritis persistent	81(48.2)	23 (22.1)	<0.0001
Oligoarthritis extended	17 (10.1)	35 (33.6)	<0.0001
RF-negative polyarthritis	22 (13.1)	14 (13.5)	1.0
RF-positive polyarthritis	0	2 (1.9)	0.15
Enthesitis-related arthritis	11 (6.5)	13 (12.5)	0.12
Psoriatic arthritis	8 (4.8)	8 (7.7)	0.43
Undifferentiated	21(12.5)	7 (6.7)	0.15
Systemic JIA	8 (4.8)	2 (1.9)	0.33
Treatment history, n (%)			
sDMARD at baseline	22 (13.1)	15 (14.4)	0.70
bDMARD at baseline	2 (1.2)	5 (4.8)	0.11
sDMARD, baseline to 8-year follow-up	61 (36.3)	56 (53.8)	0.001
bDMARD, baseline to 8-year follow-up	9 (5.4)	17 (16.3)	0.005
No medication from 8-to18-year follow-up	122 (72.6)	24 (23.1)	<0.0001
sDMARD at 18-year follow-up	9 (5.4)	30 (28.8)	<0.0001
bDMARD at 18-year follow-up	8 (4.8)	25 (24.0)	<0.0001
sDMARD, baseline to 18-year follow-up	63 (37.5)	61 (58.7)	0.001
bDMARD, baseline to 18-year follow-up	15 (8.9)	38 (36.5)	<0.0001
Disease activity measures at 18-year follow-up			
Number of active joints, median (IQR)	0 (0-0)	0 (0-1)	0.0001
PhGA, median (IQR)	0 (0-0), n=163	1.0 (0-2.0), n=101	0.0001
PaGA, median (IQR)	0 (0-0.5), n=151	2.0 (0.5-4.5), n=95	0.0001
Active disease ACR 2011 criteria, n (%) **	11/162 (6.8)	62/102 (60.8)	0.0001
cJADAS10 >1, n (%)	18/147 (12.2)	73/94 (77.7)	0.0001
cJADAS10 score, median (IQR)	0 (0-0.5)	4.0 (1.5-8.5)	0.0001
Pain VAS, median (IQR)	0 (0-1.0), n=151	2.0 (0.5-4.0), n=95	0.0001
Morning stiffness of any duration, n (%)	26/140 (18.6)	48/93 (51.6)	<0.0001
Morning stiffness ≥ 15 minutes, n (%)	9/26 (34.6)	19/48 (39.6)	0.67
Uveitis diagnose, n (%)	27 (16.1)	29 (27.9)	0.02
Damage, n (%)			
JADI-A >0	8 (4.7)	20 (19.2)	0.009
JADI-E >0	9 (5.3)	21 (20.2)	0.004
Surgery related to JIA sequel	6 (3.6)	7 (6.7)	0.18

MiDA, minimal disease activity; ID, inactive disease; MDA, moderate disease activity; IQR, interquartile range; ANA, antinuclear antibodies; *ANA measured by immunofluorescence on Hep-2 cells, performed at least twice with a minimum of three months apart; HLA-B27, human leukocyte antigen B27; ILAR, International League of Associations for Rheumatology; RF, rheumatoid factor; sDMARD, synthetic disease-modifying antirheumatic drug; bDMARD, biologic disease-modifying antirheumatic drug; PhGA, physician's global assessment of disease activity; PaGA, patient global assessment of disease impact on well-being; **ACR 2011 criteria, American College of Rheumatology 2011 criteria; cJADAS10, clinical Juvenile Arthritis Disease Activity score (0-30); VAS, visual analogue scale (0-10); JADI, Juvenile Arthritis Damage Index, A=articular damage (0-72), E= extraarticular damage (0-17); JIA, juvenile idiopathic arthritis.

Supplementary Table S4b. Comparisons of the two disease activity trajectory groups with high disease activity at baseline

Characteristics	Group 3 (HDA-MiDA) n=119	Group 4 (HDA-HDA) n=36	P value
Gender female, n (%)	82 (68.9)	31 (86.1)	0.04
Age at onset of symptoms (years), median (IQR)	6.4 (2.3-9.6)	8.7 (3.8-11.5)	0.07
Age at last study visit (years), median (IQR)	23.6 (20.2-27.3)	26.4 (20.9-29.4)	0.12
Time to first study visit (months), median (IQR)	7 (6-11)	7 (6-12)	0.85
Time to last study visit (years), median (IQR)	17.5 (16.7-18.2)	17.4 (16.3-18.2)	0.50
Full-time employed or student, n (%)	84 (70.6)	22 (61.1)	0.08
Transferred directly to adult rheum. care, n (%)	56 (47.1)	26 (72.2)	0.008
Transferred later to adult rheum. care, n (%)	12/100 (12.0)	5/29 (17.2)	0.46
ANA positive, n (%) *	44/108 (40.7)	14/30 (46.6)	0.56
HLA-B27 positive, n (%)	27/118 (22.9)	7/36 (19.4)	0.62
ILAR category at 18-year follow-up, n (%)			
Oligoarthritis persistent	11(9.2)	0	0.06
Oligoarthritis extended	30 (25.2)	3 (8.3)	0.03
RF-negative polyarthritis	28 (23.5)	11 (30.6)	0.40
RF-positive polyarthritis	3 (2.5)	1 (2.8)	1.0
Enthesitis-related arthritis	10 (8.4)	7 (19.4)	0.07
Psoriatic arthritis	9 (7.6)	3 (8.3)	1.00
Undifferentiated	24 (20.2)	11(30.6)	0.25
Systemic JIA	4 (3.4)	0	0.57
Treatment history, n (%)			
sDMARD at baseline	29 (24.4)	12 (33.3)	0.38
bDMARD at baseline	0	0	
sDMARD, baseline to 8-year follow-up	93 (78.2)	35 (97.2)	0.002
bDMARD, baseline to 8-year follow-up	38 (31.9)	25 (69.4)	0.002
No medication from 8-to18-year follow-up	37 (31.1)	3 (8.3)	0.005
sDMARD at 18-year follow-up	28 (23.5)	16 (44.4)	<0.0001
bDMARD at 18-year follow-up	31 (26.1)	19 (52.8)	0.003
sDMARD, baseline to 18-year follow-up	95 (79.8)	35 (97.2)	0.01
bDMARD, baseline to 18-year follow-up	46 (38.7)	28 (77.8)	<0.0001
Disease activity measures at 18-year follow-up			
Number of active joints, median (IQR)	0 (0-0)	2 (0-4)	0.0001
PhGA, median (IQR)	0 (0-0.5), n=116	3.0 (1.0-4.5), n=36	0.0001

PaGA, median (IQR)	0.5 (0-2.0), n=115	4.0 (2.0-7.5), n=35	0.0001
Active disease ACR 2011 criteria, n (%) **	36/115 (31.3)	30/36 (83.3)	0.0001
cJADAS10 >1, n (%)	53/113 (46.9)	32/35 (91.4)	0.0001
cJADAS10 score, median (IQR)	1.0 (0-3.0)	10 (6.5-14.0)	0.0001
Pain VAS, median (IQR)	1.0 (0-3.5), n=115	4.5 (1.5-7.0), n=35	0.0001
Morning stiffness of any duration, n (%)	39/111 (35.1)	23/35 (65.7)	0.001
Morning stiffness ≥ 15 minutes, n (%)	25/39 (64.1)	14/23 (60.9)	0.80
Uveitis diagnose, n (%)	32 (26.9)	7 (19.4)	0.25
Damage, n (%)			
JADI-A >0	23 (19.3)	18 (50.0)	<0.0001
JADI-E >0	9 (7.6)	4 (11.1)	0.90
Surgery related to JIA sequel	10 (8.4)	7 (19.4)	0.07

MiDA, minimal disease activity; HDA, high disease activity; IQR, interquartile range; ANA, antinuclear antibodies; *ANA measured by immunofluorescence on Hep-2 cells, performed at least twice with a minimum of three months apart; HLA-B27, human leukocyte antigen B27; ILAR, International League of Associations for Rheumatology; RF, rheumatoid factor; sDMARD, synthetic disease-modifying antirheumatic drug; bDMARD, biologic disease-modifying antirheumatic drug; PhGA, physician's global assessment of disease activity; PaGA, patient global assessment of disease impact on well-being; **ACR 2011 criteria, American College of Rheumatology 2011 criteria; cJADAS10, clinical Juvenile Arthritis Disease Activity score (0-30); VAS, visual analogue scale (0-10); JADI, Juvenile Arthritis Damage Index, A=articular damage (0-72), E= extraarticular damage (0-17); JIA, juvenile idiopathic arthritis.