

Supplementary Table S1. Oedema grade in each muscle evaluated in IIM and MD.

	Disease	Grade 0	Grade 1	Grade 2	Grade 3	<i>p</i>
gluteus minimus	IIM (%)	45 (53.6)	18 (21.4)	20 (23.8)	1 (1.2)	0.001
	MD (%)	35 (87.5)	5 (12.5)	0 (0)	0 (0)	
gluteus medium	IIM (%)	46 (54.1)	16 (18.8)	22 (25.9)	1 (1.2)	0.001
	MD (%)	35 (87.5)	5 (12.5)	0 (0)	0 (0)	
gluteus maximus	IIM (%)	45 (50.6)	23 (25.8)	17 (19.1)	4 (4.5)	0.001
	MD (%)	35 (83.3)	7 (16.7)	0 (0)	0 (0)	
iliopsoas	IIM (%)	40 (51.9)	8 (10.4)	18 (23.4)	11 (14.3)	<0.001
	MD (%)	36 (94.7)	2 (5.3)	0 (0)	0 (0)	
piriformis	IIM (%)	60 (68.2)	17 (19.3)	10 (11.4)	1 (1.1)	0.001
	MD (%)	42 (100.0)	0 (0)	1 (1.1)	0 (0)	
tensor fasciae latae	IIM (%)	54 (62.1)	20 (23.0)	13 (14.9)	0 (0)	<0.001
	MD (%)	40 (100)	0 (0)	0 (0)	0 (0)	
rectus femoris	IIM (%)	44 (49.4)	29 (32.6)	13 (14.6)	3 (3.4)	n.s.
	MD (%)	31 (72.1)	8 (18.6)	4 (9.3)	0 (0)	
vastus medialis	IIM (%)	43 (48.3)	25 (28.1)	18 (20.2)	3 (3.4)	n.s.
	MD (%)	26 (60.5)	10 (23.2)	7 (16.3)	0 (0)	
vastus intermedius	IIM (%)	45 (50.6)	21 (23.6)	19 (21.3)	4 (4.5)	n.s.
	MD (%)	28 (65.1)	8 (18.6)	7 (16.3)	0 (0)	
vastus lateralis	IIM (%)	34 (38.2)	27 (30.3)	23 (25.8)	5 (5.6)	0.04
	MD (%)	27 (62.8)	9 (20.9)	7 (16.3)	0 (0)	
sartorius	IIM (%)	54 (60.7)	23 (25.8)	10 (11.2)	2 (2.2)	n.s.
	MD (%)	36 (83.7)	4 (9.3)	3 (7.0)	0 (0)	
pectineus	IIM (%)	59 (67.0)	18 (20.5)	9 (10.2)	2 (2.3)	<0.001
	MD (%)	43 (100)	0 (0)	0 (0)	0 (0)	
adductor longus	IIM (%)	53 (60.2)	17 (19.3)	14 (15.9)	4 (4.6)	<0.001
	MD (%)	41 (95.3)	2 (4.6)	0 (0)	0 (0)	
gracilis	IIM (%)	62 (69.7)	16 (18.0)	9 (10.1)	2 (2.2)	n.s.
	MD (%)	35 (81.4)	5 (11.6)	3 (7.0)	0 (0)	
adductor brevis	IIM (%)	50 (56.8)	20 (22.7)	13 (14.8)	5 (5.7)	<0.001
	MD (%)	41 (95.3)	2 (4.7)	0 (0)	0 (0)	
adductor magnus	IIM (%)	41 (46.1)	29 (32.6)	13 (14.8)	6 (6.7)	n.s.
	MD (%)	28 (65.1)	10 (23.3)	5 (11.6)	0 (0)	
obturator externus	IIM (%)	55 (63.2)	13 (14.9)	16 (18.4)	3 (3.5)	<0.001
	MD (%)	40 (100)	0 (0)	0 (0)	0 (0)	
obturator internus	IIM (%)	58 (66.7)	10 (11.5)	17 (19.5)	2 (2.3)	0.001
	MD (%)	41 (100)	0 (0)	0 (0)	0 (0)	
biceps femoris	IIM (%)	46 (51.7)	30 (33.7)	11 (12.4)	2 (2.2)	n.s.
	MD (%)	28 (65.1)	11 (25.6)	4 (9.3)	0 (0)	
semimembranosus	IIM (%)	49 (55.0)	27 (30.4)	11 (12.4)	2 (2.2)	n.s.
	MD (%)	29 (67.5)	12 (27.9)	1 (2.3)	1 (2.3)	
semitendinosus	IIM (%)	58 (65.2)	17 (19.1)	11 (12.4)	3 (3.3)	n.s.
	MD (%)	34 (79.1)	7 (16.3)	2 (4.6)	0 (0)	

IIM: idiopathic inflammatory myopathies; MD: muscular dystrophies.

Supplementary Table S2. adipose infiltration/substitution in each muscle evaluated in IIM and MD.

	Disease	Grade 0	Grade 1	Grade 2	<i>p</i>
gluteus minimus	IIM (%)	69 (83.1)	10 (12.1)	4 (4.82)	<0.001
	MD (%)	21 (52.5)	3 (7.5)	16 (40)	
gluteus medius	IIM (%)	71 (85.5)	10 (12.0)	2 (2.41)	<0.001
	MD (%)	23 (57.5)	4 (10.0)	13 (32.5)	
gluteus maximus	IIM (%)	54 (60.7)	33 (37.1)	2 (2.2)	0.002
	MD (%)	24 (57.1)	10 (23.8)	8 (19.1)	
iliopsoas	IIM (%)	72 (93.5)	3 (3.9)	2 (2.6)	n.s.
	MD (%)	36 (92.3)	1 (2.6)	2 (5.1)	
piriformis	IIM (%)	83 (94.3)	5 (5.7)	0 (0)	0.004
	MD (%)	38 (90.5)	0 (0)	4 (9.5)	
tensor fasciae latae	IIM (%)	62 (71.3)	13 (14.9)	12 (13.8)	0.078
	MD (%)	26 (63.4)	3 (7.3)	12 (29.3)	
rectus femoris	IIM (%)	79 (88.8)	4 (4.5)	6 (6.7)	n.s.
	MD (%)	35 (81.4)	1 (2.3)	7 (16.3)	
vastus medialis	IIM (%)	77 (86.5)	6 (6.7)	6 (6.7)	<0.001
	MD (%)	22 (51.2)	4 (9.3)	17 (39.5)	
vastus intermedius	IIM (%)	77 (86.5)	7 (7.9)	5 (5.6)	<0.001
	MD (%)	20 (46.5)	5 (11.6)	18 (41.9)	
vastus lateralis	IIM (%)	69 (77.5)	11 (12.4)	9 (10.1)	<0.001
	MD (%)	19 (44.2)	7 (16.3)	17 (39.5)	
sartorius	IIM (%)	73 (82.0)	12 (13.5)	4 (4.5)	n.s.
	MD (%)	30 (69.8)	6 (14.0)	7 (16.2)	
pectineus	IIM (%)	85 (69.1)	2 (2.3)	1 (1.1)	n.s.
	MD (%)	38 (88.4)	1 (2.3)	4 (9.3)	
adductor longus	IIM (%)	83 (94.3)	3 (3.4)	2 (2.3)	0.001
	MD (%)	32 (74.4)	2 (4.6)	9 (21.0)	
gracilis	IIM (%)	83 (93.3)	6 (6.7)	0 (0)	<0.001
	MD (%)	26 (60.5)	6 (13.9)	11 (25.6)	
adductor brevis	IIM (%)	83 (94.3)	5 (5.7)	0 (0)	<0.001
	MD (%)	32 (74.4)	2 (4.7)	9 (20.9)	
adductor magnus	IIM (%)	67 (75.3)	17 (19.1)	5 (5.6)	<0.001
	MD (%)	20 (46.5)	4 (9.3)	19 (44.2)	
obturator externus	IIM (%)	83 (94.3)	5 (5.7)	0 (0)	n.s.
	MD (%)	37 (92.5)	2 (5.0)	1 (2.5)	
obturator internus	IIM (%)	84 (96.5)	3 (3.5)	0 (0)	n.s.
	MD (%)	37 (90.2)	2 (4.9)	2 (4.9)	
biceps femoris	IIM (%)	49 (55.1)	34 (38.2)	6 (6.7)	<0.001
	MD (%)	12 (27.9)	14 (32.5)	17 (39.5)	
semimembranosus	IIM (%)	37 (41.6)	45 (50.6)	7 (7.9)	<0.001
	MD (%)	11 (25.6)	10 (23.3)	22 (51.1)	
semitendinosus	IIM (%)	53 (59.5)	30 (33.7)	6 (6.7)	<0.001
	MD (%)	15 (34.9)	8 (18.6)	20 (46.5)	

IIM: idiopathic inflammatory myopathies; MD: muscular dystrophies.

Supplementary Table S3. Muscular atrophy in each muscle evaluated in IIM and MD.

	Disease	Grade 0	Grade 1	Grade 2	Grade 3	<i>p</i>
gluteus minimus	IIM (%)	80 (95.2)	3 (3.6)	1 (1.2)	0 (0)	<0.001
	MD (%)	22 (55.0)	6 (15.0)	6 (15)	6 (15)	
gluteus medius	IIM (%)	81 (96.4)	2 (2.4)	1 (1.2)	0 (0)	<0.001
	MD (%)	24 (60)	6 (15)	5 (12.5)	5 (12.5)	
gluteus maximus	IIM (%)	81 (91.0)	7 (7.9)	1 (1.1)	0 (0)	<0.001
	MD (%)	26 (61.9)	9 (21.4)	4 (9.5)	3 (7.2)	
iliopsoas	IIM (%)	71 (91.0)	6 (6.7)	1 (1.3)	0 (0)	n.s.
	MD (%)	31 (79.5)	6 (15.4)	1 (2.6)	1 (2.6)	
piriformis	IIM (%)	88 (100)	0 (0)	0 (0)	0 (0)	0.004
	MD (%)	36 (85.7)	4 (9.5)	1 (2.4)	1 (2.4)	
tensor fasciae latae	IIM (%)	86 (98.8)	1 (1.2)	0 (0)	0 (0)	<0.001
	MD (%)	29 (70.7)	2 (4.9)	9 (21.9)	1 (2.5)	
rectus femoris	IIM (%)	79 (88.8)	6 (6.7)	3 (3.4)	1 (1.1)	n.s.
	MD (%)	33 (76.8)	2 (4.6)	5 (11.6)	3 (7.0)	
vastus medialis	IIM (%)	76 (85.4)	9 (10.1)	4 (4.5)	0 (0)	<0.001
	MD (%)	22 (51.2)	5 (11.6)	8 (18.6)	8 (18.6)	
vastus intermedius	IIM (%)	76 (85.4)	9 (10.1)	3 (3.4)	1 (1.1)	<0.001
	MD (%)	19 (44.2)	7 (16.3)	9 (20.9)	8 (18.6)	
vastus lateralis	IIM (%)	76 (85.4)	9 (10.1)	3 (3.4)	1 (1.1)	<0.001
	MD (%)	22 (51.2)	6 (13.9)	7 (16.3)	8 (18.6)	
sartorius	IIM (%)	54 (60.7)	87 (97.8)	2 (2.2)	0 (0)	<0.001
	MD (%)	36 (83.7)	29 (67.4)	3 (7.0)	4 (9.3)	
pectineus	IIM (%)	88 (100)	0 (0)	0 (0)	0 (0)	0.001
	MD (%)	35 (81.4)	3 (7.0)	2 (4.6)	3 (7)	
adductor longus	IIM (%)	85 (96.6)	3 (3.4)	0 (0)	0 (0)	<0.001
	MD (%)	32 (74.4)	2 (4.6)	6 (13.9)	3 (7)	
gracilis	IIM (%)	87 (97.8)	2 (2.2)	0 (0)	0 (0)	<0.001
	MD (%)	29 (67.4)	7 (16.3)	2 (4.6)	5 (11.7)	
adductor brevis	IIM (%)	84 (95.4)	3 (3.4)	1 (1.2)	0 (0)	<0.001
	MD (%)	31 (72.1)	2 (4.7)	5 (11.6)	5 (11.6)	
adductor magnus	IIM (%)	75 (84.3)	11 (12.4)	2 (2.2)	1 (1.1)	<0.001
	MD (%)	22 (51.2)	5 (11.6)	6 (13.9)	10 (23.3)	
obturator externus	IIM (%)	85 (96.6)	3 (3.4)	0 (0)	0 (0)	n.s.
	MD (%)	36 (90)	3 (7.5)	0 (0)	1 (2.5)	
obturator internus	IIM (%)	85 (96.6)	3 (3.4)	0 (0)	0 (0)	0.031
	MD (%)	36 (87.8)	1 (2.4)	2 (4.9)	2 (4.9)	
biceps femoris	IIM (%)	62 (69.7)	22 (24.7)	3 (3.4)	2 (2.2)	<0.001
	MD (%)	15 (34.9)	8 (18.6)	7 (16.3)	13 (30.2)	
semimembranosus	IIM (%)	62 (69.7)	23 (25.8)	2 (2.2)	2 (1.1)	<0.001
	MD (%)	14 (32.6)	5 (11.6)	8 (18.6)	16 (37.2)	
semitendinosus	IIM (%)	65 (73.0)	20 (22.5)	3 (3.4)	1 (1.1)	<0.001
	MD (%)	17 (39.5)	4 (9.3)	7 (16.3)	15 (35.9)	

IIM: idiopathic inflammatory myopathies; MD: muscular dystrophies.

Supplementary Table S4. Definition of indices for muscular oedema. The strength of direct or inverse association (ρ) of each index with the score were defined as: mild if $\rho < 0.3$ or $\rho > -0.3$, moderate if $0.3 \leq \rho < 0.5$ or $-0.5 < \rho \leq -0.3$, good if $0.5 \leq \rho < 0.7$ or $-0.7 < \rho \leq -0.5$, strong if $\rho \geq 0.7$ or $\rho \leq -0.7$.

	ρ	sd	IC95%	
Age at MR	0.16	0.09	-0.03	0.34
Disease duration	-0.35	0.08	-0.52	-0.18
gluteus minimus	0.92	0.02	0.89	0.95
gluteus medium	0.92	0.02	0.89	0.96
gluteus maximus	0.81	0.03	0.74	0.87
iliopsoas	0.83	0.03	0.77	0.89
piriformis	0.89	0.02	0.85	0.93
and tensor fasciae latae	0.89	0.02	0.84	0.93
rectus femoris	0.72	0.05	0.63	0.81
vastus medialis	0.61	0.06	0.50	0.73
vastus intermedius	0.60	0.06	0.48	0.72
vastus lateralis	0.63	0.06	0.52	0.75
sartorius	0.68	0.05	0.58	0.78
pectineus	0.85	0.03	0.80	0.91
adductor longus	0.89	0.02	0.85	0.93
gracilis	0.77	0.04	0.69	0.85
adductor brevis	0.90	0.02	0.86	0.94
adductor magnus	0.64	0.06	0.52	0.75
obturator externus	0.90	0.02	0.86	0.94
obturator internus	0.90	0.02	0.86	0.94
biceps femoris	0.34	0.09	0.18	0.51
semimembranosus	0.66	0.06	0.55	0.76
semitendinosus	0.50	0.07	0.35	0.64

Supplementary Table S5. definition of indices for muscular adipose tissue infiltration/substitution. The strength of direct or inverse association (ρ) of each index with the score were defined as: mild if $\rho < 0.3$ or $\rho > -0.3$, moderate if $0.3 \leq \rho < 0.5$ or $-0.5 < \rho \leq -0.3$, good if $0.5 \leq \rho < 0.7$ or $-0.7 < \rho \leq -0.5$, strong if $\rho \geq 0.7$ or $\rho \leq -0.7$.

	ρ	sd	IC95%	
Age at MR	0.05	0.09	-0.13	0.23
Disease duration	0.31	0.09	0.13	0.48
gluteus minimus	-0.73	0.05	-0.64	-0.83
gluteus medium	-0.73	0.05	-0.64	-0.83
gluteus maximus	-0.67	0.06	-0.56	-0.78
iliopsoas	-0.48	0.08	-0.33	-0.63
piriformis	-0.57	0.07	-0.44	-0.70
and tensor fasciae latae	-0.64	0.06	-0.52	-0.75
rectus femoris	-0.53	0.07	-0.39	-0.67
vastus medialis	-0.77	0.04	-0.69	-0.86
vastus intermedius	-0.77	0.04	-0.69	-0.86
vastus lateralis	-0.64	0.06	-0.52	-0.76
sartorius	-0.64	0.06	-0.52	-0.76
pectineus	-0.59	0.07	-0.46	-0.72
adductor longus	-0.67	0.06	-0.56	-0.78
gracilis	-0.72	0.05	-0.63	-0.82
adductor brevis	-0.69	0.05	-0.58	-0.80
adductor magnus	-0.70	0.05	-0.60	-0.81
obturator externus	-0.32	0.09	-0.15	-0.50
obturator internus	-0.41	0.08	-0.25	-0.57
biceps femoris	-0.77	0.04	-0.68	-0.85
semimembranosus	-0.72	0.05	-0.63	-0.82
semitendinosus	-0.71	0.05	-0.61	-0.81

Supplementary Table S6. definition of indices for muscular atrophy. The strength of direct or inverse association (ρ) of each index with the score were defined as: mild if $\rho < 0.3$ or $\rho > -0.3$, moderate if $0.3 \leq \rho < 0.5$ or $-0.5 \leq \rho < -0.3$, good if $0.5 \leq \rho < 0.7$ or $-0.7 \leq \rho < -0.5$, strong if $\rho \geq 0.7$ or $\rho \leq -0.7$.

	ρ	sd	IC95%	
Age at MR	0.12	0.10	-0.07	0.31
Disease duration	-0.32	0.09	-0.49	-0.15
gluteus minimus	-0.87	0.02	-0.92	-0.82
gluteus medius	-0.91	0.02	-0.95	-0.88
gluteus maximus	-0.87	0.03	-0.92	-0.82
iliopsoas	-0.56	0.07	-0.69	-0.42
piriformis	-0.67	0.05	-0.77	-0.56
and tensor fasciae latae	-0.75	0.04	-0.84	-0.67
rectus femoris	-0.55	0.07	-0.68	-0.42
vastus medialis	-0.84	0.03	-0.90	-0.77
vastus intermedius	-0.82	0.03	-0.88	-0.75
vastus lateralis	-0.81	0.03	-0.88	-0.75
sartorius	-0.78	0.04	-0.85	-0.70
pectineus	-0.79	0.04	-0.86	-0.71
adductor longus	-0.72	0.05	-0.81	-0.62
gracilis	-0.81	0.04	-0.87	-0.74
adductor brevis	-0.67	0.05	-0.78	-0.57
adductor magnus	-0.73	0.05	-0.82	-0.63
obturator externus	-0.58	0.06	-0.71	-0.45
obturator internus	-0.59	0.06	-0.71	-0.46
biceps femoris	-0.76	0.04	-0.84	-0.67
semimembranosus	-0.74	0.04	-0.83	-0.65
semitendinosus	-0.73	0.05	-0.82	-0.63