

Supplementary Table S1. Clinical and laboratory features of the patients with malignancy who were detected by PET/CT scan.

Patients	Age (years)	Gender	Clinical diagnosis	Malignancy	Muscle PET/CT positivity	Autoantibody status	Outcome
1	54	Male	DM	Lung	Yes	NA	Exitus
2	56	Female	DM	Endometrium	Yes	Anti-Tif-1-gamma	Exitus
3	57	Male	DM	Lung	No	NA	Alive
4	59	Male	DM	CLL and prostate cancer	Yes	NA	Exitus
5	64	Female	DM	Parotis	Yes	Anti-Ro and anti-Tif-1-gamma	Alive
6	61	Female	DM	Breast	No	Anti-Tif-1-gamma	Alive

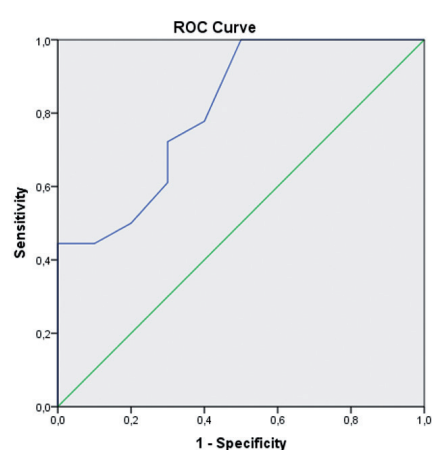
DM: dermatomyositis; CLL: chronic lymphocytic leukaemia; NA: not available; PET/CT: positron emission tomography/computer tomography.

Supplementary Table S2. Univariable analysis of clinical and laboratory characteristics of patients with IIM according to PET-CT findings.

Variables	Overall PET/CT positivity			Liver			Mediastinum		
	Yes (n=23)	No (n=11)	p value	Yes (n=13)	No (n=21)	p value	Yes (n=23)	No (n=11)	p value
Muscle strength (median; IQR)									
Upper extremity	4 (1.5)	4 (1.25)	0.5	4 (1.75)	4 (1)	0.7	4 (1.5)	4 (1.25)	0.5
Lower extremity	4 (1.5)	4 (2)	0.6	4 (2.5)	4 (1.25)	0.6	4 (1.5)	4 (2)	0.6
Diagnosis (n, %)									
DM	15 (60)	10 (40)	0.2	9 (36)	16 (64)	0.9	15 (60)	10 (40)	0.15
PM	7 (87.5)	1 (12.5)		3 (37.5)	5 (62.5)		7 (87.5)	1 (12.5)	
Muscle weakness (n, %)									
Yes	17 (77)	5 (23)	0.4	9 (41)	13 (59)	0.9	17 (77)	5 (23)	0.4
No	5 (63)	3 (38)		3 (37.5)	5 (62.5)		5 (62.5)	3 (37.5)	
EMG (n, %)									
Compatible with myositis	15 (78.9)	4 (21.1)	-0.047** (p=0.8)	9 (45)	11 (55)	-0.03** (p=0.8)	15 (79)	4 (21)	-0.05** (p=0.8)
Not compatible	5 (83.3)	1 (16.7)		2 (40)	3 (60)		5 (83.3)	1 (16.7)	
Muscle biopsy (n, %)									
Compatible with myositis	8 (88.9)	1 (11.1)	0.418** (p=0.1)	4 (40)	6 (60)	0.235** (p=0.2)	8 (80)	2 (20)	0.418** (p=0.1)
Not compatible	2 (50)	2 (50)		0	3 (100)		1 (33)	2 (66)	

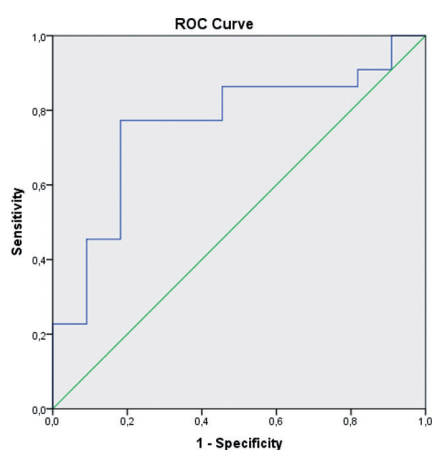
SD: standard deviation; IQR: inter quartile range; CK: creatinine kinase; LDH: lactate dehydrogenase; ESH: erythrocyte sedimentation rate; CRP: C-reactive protein; EMG: electromyography; MRI: magnetic resonance imaging.

*Fischer's exact test, **kappa test.



Diagonal segments are produced by ties.

Supplementary Fig. S1. ROC curve of CRP levels predicting PET-CT positivity.



Supplementary Fig. S2. ROC curve of CK levels predicting PET-CT positivity.

Supplementary Table S3. Univariate analysis of clinical and laboratory features and PET findings.

Variables	Muscle weakness			Muscle MRI			EMG			Muscle biopsy			Relapse			Malignancy			Mortality		
	Yes	No	p value	Positive	Negative	p value	Positive	Negative	p value	Positive	Negative	p value	Yes	No	p value	Yes	No	p value	Yes	No	p value
Age (years) (mean ± SD; Range)	54.2±13 (25-85)	56±14.7 (26-78)	0.8	52.5±12.2 (25-74)	49.4±13.6 (26-59)	0.6	55.5±14.2 (25-85)	48.8±14.7 (26-64)	0.4	63.7±11.3 (49-85)	50±8.9 (40-57)	0.08	64.7±10.8 (53-85)	52.4±12.9 (25-78)	0.03	60.1±9.6 (49-85)	53.0±14.04 (25-78)	0.2	59±4.1 (54-66)	54.2±14.1 (25-85)	0.4
Age of diagnosis (mean ± SD; Range)	51.9±13.9 (24-82)	35.4±16 (25-78)	0.8	50.7±12.9 (24-73)	47.2±13 (25-58)	0.6	53±14.3 (24-82)	45.6±14 (25-62)	0.3	60.8±12.9 (46-82)	43.7±6.4 (40-51)	0.017	60.7±12.9 (40-82)	50.6±13.3 (24-78)	0.084	56.7±12.1 (42-82)	51.3±14.3 (24-78)	0.3	58.7±5.9 (53-67)	51.5±14.7 (24-82)	0.25
Gender (n, %)																					
Female	12 (63)	7 (37)	0.2	10 (71)	4 (29)	0.3	12 (75)	4 (25)	0.6	6 (86)	1 (14)	0.5	5 (25)	15 (75)	0.7	7 (33)	14 (67)	0.7	2 (9)	20 (91)	0.15
Male	10 (90)	1 (10)		9 (90)	1 (10)		8 (89)	1 (11)		4 (67)	2 (33)		2 (17)	10 (83)		3 (25)	9 (75)		4 (33)	8 (67)	
Baseline CK levels (U/L) (median; IQR)	1620 (3726)	106 (89)	0.008	1120 (4500)	115 (133)	0.046	619 (3429)	1620 (5490)	0.9	1460 (3291)	115 (3228)	1	619 (3229)	204 (2338)	0.8	168 (1530)	360 (2608)	0.9	495 (3364)	120 (2231)	0.24
Baseline LDH levels (U/L) (median; IQR)	540 (492)	251 (99.5)	0.004	539 (444)	263 (92)	0.024	468 (558)	494 (468)	0.6	694 (558)	239 (321)	0.1	468 (369)	318 (509)	0.7	332 (413)	356 (518)	0.9	468 (360)	314 (511)	0.3
Baseline ESH levels (mm/hour) (median; IQR)	22 (17)	17.5 (15)	0.26	21.5 (18.3)	22 (18.5)	0.5	22 (17.5)	19 (13.3)	0.5	21.5 (23.5)	11.5 (12)	0.3	22 (16)	22 (19.3)	0.5	27 (23)	22 (16.5)	0.8	23 (20)	22 (18.5)	0.5
Baseline CRP levels (mg/L) (median; IQR)	9 (22)	1.4 (1.6)	0.001	9 (28.5)	1 (2.7)	0.003	8.5 (26)	5 (11)	0.34	8 (15)	4 (5.7)	0.4	12.5 (32)	2 (8)	0.036	2 (4.6)	8 (23)	0.028	11 (38)	4 (9.2)	0.23
Baseline troponin levels (pg/mL) (median; IQR)	194 (920)	NA		194 (838)	NA		231 (867)	194 (683)	1	991 (5188)	NA		72 (668)	337 (946)	0.6	90 (54)	337 (1088)	0.3	81 (931)	266 (899)	0.86
CK levels at last visit (U/L) (median; IQR)	75 (184)	47.5 (44.3)	0.4	63 (293)	45 (54)	0.4	75 (130)	51 (433)	0.8	85.5 (288)	75 (51)	0.6	32 (57)	70.5 (76)	0.054	57.5 (88)	61 (78)	0.9	58.5 (390)	58 (70)	0.98
Upper proximal extremity	1.8 (1.6)	1.4 (0.7)	0.4	1.85 (1.9)	1.3 (0.4)	0.17	1.8 (1.6)	1.56 (1.97)	0.7	2.35 (2.3)	1 (0.4)	0.049	1.9 (2.3)	1.6 (1.2)	0.2	1.56 (0.7)	1.8 (1.75)	0.5	2.3 (2.1)	1.6 (0.9)	0.12
Upper distal extremity	1.7 (1.3)	1.7 (1.6)	0.8	1.85 (1.4)	1.05 (4.1)	0.8	1.7 (1.2)	1.9 (1.25)	0.7	2.15 (1.1)	0.87 (0.1)	0.007	1.7 (1.7)	1.7 (1.2)	0.9	1.7 (1)	1.5 (1.35)	0.6	2.8 (3.9)	1.45 (1.1)	0.038
Lower proximal extremity	1.8 (1.26)	1.94 (1.3)	0.5	1.8 (1.4)	1.3 (0.55)	0.3	1.94 (1.3)	1.7 (2.55)	0.8	2.25 (1.1)	1.1 (0.2)	0.028	1.6 (2.3)	1.8 (1.3)	0.5	1.8 (0.35)	1.6 (1.3)	0.7	1.9 (1.15)	1.7 (1.3)	0.7
Lower distal extremity	2 (0.85)	2 (1.25)	0.8	2.1 (0.9)	1.7 (0.4)	0.4	2 (0.9)	2.05 (0.2)	1	2 (1)	1.74 (1.1)	0.4	1.5 (0.7)	2.2 (1)	0.017	2 (1.8)	2 (0.9)	0.9	1.95 (0.55)	2.1 (0.9)	0.4
Overall	2.2 (1.3)	2.6 (2.8)	0.4	2.7 (1.6)	1.8 (3.9)	0.5	2.5 (1.7)	2.85 (2.5)	0.5	2.85 (1.55)	1.6 (0.8)	0.1	1.9 (2.2)	2.5 (1.6)	0.7	2.1 (2.1)	2.5 (1.65)	0.9	3.2 (3.3)	2.1 (0.9)	0.078
Diagnosis (n, %)																					
DM	15 (68)	7 (32)	0.4	12 (75)	4 (25)	0.6	13 (81)	3 (19)	0.7	3 (50)	3 (50)	0.18	4 (17)	19 (83)	0.6	8 (33)	16 (67)	0.7	5 (20)	20 (80)	0.3
PM	6 (86)	1 (14)		6 (86)	1 (14)		7 (87.5)	1 (12.5)		6 (100)	0		2 (25)	6 (75)		2 (25)	6 (75)		0	8 (100)	

SD: standard deviation; IQR: inter quartile range; CK: creatinine kinase; LDH: lactate dehydrogenase; ESH: erythrocyte sedimentation rate; CRP: C-reactive protein; EMG: electromyography; MRI: magnetic resonance imaging; DM: dermatomyositis; PM: polymyositis.