

Supplemental Table 1. Clinical characteristics of 10 cGVHD patients with sclerosis (patients 1-10) and 2 cGVHD patients with no skin involvement (patients 11, 12)

Patient	1	2	3	4	5	6	7	8	9	10	11	12	Summary†	
Age/sex‡	51M	40M	33M	47M	71F	28F	53M	52M	55M	48M	11M	37M	48 [34 – 53] 83% M	
BMI	32.5	20.7	-	23.6	21.4	14.3	28.8	25.2	24.1	20.1	22.2	24.3	23.6 [20.7-25.2]	
Disease§	AML	MM	ALL	NHL	AML	NHL	ALL	MDS	AML	ALL	ALL	NHL	33% ALL 25% AML 25% NHL 8% MM 8% MDS	
Graft source	PB	PB	PB	PB	PB	PB	PB	PB	BM	PB	BM	PB	83% PB 17% BM	
Months post-HCT	8	34	56	86	64	64	36	153	57	23	56	36	56 [27 – 64] months	
Number of prior lines of cGVHD therapy	1	2	6	3	3	6	2	1	6	4	1	8	3 [1 – 6] prior therapies	
Follow-up time (months)	5	7	7	5	9	7	8	3	5	2	3	3	5 [3 – 7] months	
Clinic visits (#)	10	4	5	5	11	20	10	4	7	5	2	7	6 [5 – 10] visits	
Measurement sessions (#)	6	8	9	3	4	9	15	3	3	3	4	4	5 [3 – 9] sessions	
Response type¶	PR	PR	SD	SD	SD	SD	PR	PD	PD	SD	No skin involvement		5/10 SD 3/10 PR 2/10 PD	
NIH skin score&														
Baseline	2	3	3	3	3	3	3	3	3	2				8/10 NIH 3 2/10 NIH 2
Study Completion	2	3	3	3	3	3	2	3	3	2				7/10 NIH 3 3/10 NIH 2
Presence of erythema	+	+	-	-	+	+	-	-	+	+			6/10 erythema+	
Presence of sclerosis	+	+	+	+	+	+	+	+	+	+			10/10 sclerosis+	
Patient global severity rating (1-3)*	2	2	3	2	2	3	3	3	2	2	1	-		
Provider global severity rating (0-3)+	3	3	3	3	3	3	3	3	3	3	1	3		
NIH organ scores														
Oral	1	0	-	0	1	1	1	2	0	0	0	0		
Gastrointestinal	0	0	-	0	0	0	0	0	0	0	0	0		
Eye	3	3	3	1	1	0	1	3	0	3	0	2		
Joints and fascia	0	0	2	0	0	3	0	0	0	0	1	0		
Lung	0	0	0	1	0	2	0	0	3	0	1	3		
Liver	1	0	-	0	0	0	0	0	0	0	0	0		
Genital	0	0	-	0	0	0	0	0	0	2	0	0		

Colors represent skin response (blue: clinical improvement, grey: stable disease, orange: progressive disease, green: no skin involvement)

†Values are shown as median [IQR] for continuous variables and n (%) for categorical variables.

‡Sex: M: Male, F: Female

§Disease: AML, Acute myeloblastic leukemia; ALL, acute lymphoblastic leukemia; NHL, non-Hodgkin lymphoma; MM, multiple myeloma; MDS, myelodysplastic syndrome

||Graft source: PB: Peripheral Blood, BM: Bone Marrow

¶Response type: PR: partial response, SD: stable disease, PD: progressive skin disease.

&The NIH skin score is the higher of its two component scores: a score based on the percent of body surface area affected by active cutaneous manifestations and a score based on the severity of sclerosis. We obtained the total NIH skin score by chart review, but its component scores were not consistently detailed. However, presence of sclerotic disease was noted in the oncology clinic notes for patients 1-10.

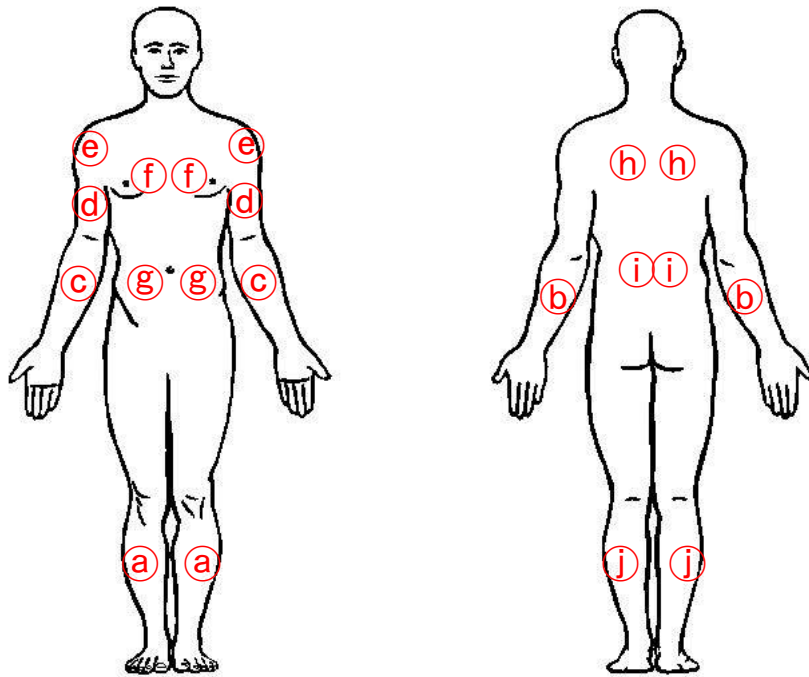
*Patient global rating (Chronic GVHD Activity Assessment-Patient Self Report - Form B from Reference 2): 1=mild, 2=moderate, 3=severe

+Provider global rating (Chronic GVHD Activity Assessment-Clinician - Form A from Reference 2): 0=none, 1=mild, 2=moderate, 3=severe

Supplemental Figure 1. MyotonPRO device



Supplemental Figure 2. MyotonPRO measurement data and linear regression slopes of 10 cGVHD patients with sclerosis (patients 1-10) and 2 cGVHD patients with no skin involvement (patients 11, 12).



Patient	1	2	3	4	5	6	7	8	9	10	11	12	Summary†*
Measured sites&													
a) Tibialis anterior	+	+	+	+	+	+	+	+	+	+	+	+	100% TA+
b) Extensor digitorum	-	-	+	+	+	+	+	-	+	+	+	+	75% ED+
c) Brachioradialis	-	-	+	-	-	+	+	-	-	+	+	+	50% BR+
d) Biceps brachii	-	-	+	+	+	+	+	-	+	+	+	+	75% BIL+
e) Deltoideus	-	-	+	-	+	+	+	-	-	+	+	+	58% MDE+
f) Pectoralis major	-	-	+	-	+	+	+	-	-	+	+	+	58% PEC+
g) Rectus abdominis	+	+	+	-	+	+	+	+	+	+	+	+	92% RA+
h) Medial trapezius	-	-	-	-	-	+	-	-	-	-	+	-	17% TRAPM+
i) Erector spinae	-	-	-	-	-	+	-	-	-	-	+	-	17% ERSPN+
j) Gastrocnemius	-	-	-	+	-	+	-	+	+	-	+	-	42% GASL+
Measurement sessions (#)	6	8	9	3	4	9	15	3	3	3	4	4	5 [3 – 9] sessions
Follow-up time (months)	5	7	7	5	9	7	8	3	5	2	3	3	5 [3 – 7] months
Starting stiffness (N/m)	592	620	716	903	688	624	536	997	666	478	305	395	662 [507-702]
Ending stiffness (N/m)	296	371	618	832	669	667	509	1053	782	562	319	407	590 [389-726]
Slope (N/m/month)	-148	-40	-16	-15	-5	1	3	18	36	45	3	3	3 [-12 – 35] N/m/month
Coefficient of determination (R ²)	0.57	0.22	0.25	0.89	0.41	0.00	0.18	0.11	1.00	0.96	0.24	0.52	0.33 [0.21 – 0.81]

^ Values are shown as median [IQR] for continuous variables and n (%) for categorical variables.

& +: bilateral measurements of the site were included in the analysis, -: the site was not included in the analysis.

*Muscle abbreviations: TA: tibialis anterior, ED: extensor digitorum, BR: brachioradialis, BIL: biceps brachii caput longus, MDE: medial deltoid, PEC: pectoralis major, RA: rectus abdominis, TRAPM: medial trapezius, ERSPN: erector spinae, GASL: gastrocnemius caput laterale.

Supplemental Figure 3. Average stiffness measurements for ten sclerotic cGVHD patients (patients 1-10) and two cGVHD patients without skin manifestations (patients 11, 12) over the study period.

