

Supplemental Table 1: Efficacy Outcomes following a Multicomponent Intervention by Sarcopenia Status

	Definition 1			Definition 2			Definition 3			Definition 4			Definition 5		
	Sarcopenic Obesity	No Sarcopenic Obesity	p-value	Sarcopenic Obesity	No Sarcopenic Obesity	p-value	Sarcopenic Obesity	No Sarcopenic Obesity	p-value	Sarcopenic Obesity	No Sarcopenic Obesity	p-value	Sarcopenic Obesity	No Sarcopenic Obesity	p-value
Weight, kg	n=18	n=26		n=6	n=38		n=20	n=24		n=29	n=15		n=26	n=18	
Baseline	105.4±18.5	94.4±14.6	0.02	98.2±15.9	97.8±16.5	0.90	102.3±18.3	92.5±11.7	0.02	102.8±18.1	91.5±12.0	0.02	103.2±18.8	93.0±12.3	0.03
Follow-up	98.0±16.3	89.8±14.8	0.09	92.4±14.3	93.3±16.2	0.90	97.9±17.6	87.5±11.3	0.03	96.8±16.6	86.1±11.5	0.03	97.0±17.2	87.7±11.9	0.053
Change	-4.39 [-7.04, -2.53]	-4.54 [-5.58, -3.50]	0.82	-5.73 [-8.30, -3.16]	-4.47 [-5.65, -3.29]	0.41	-4.39 [-6.15, 2.63]	-4.93 [-6.08, -3.80]	0.61	-4.68 [-6.19, -3.18]	-4.56 [-5.85, -3.26]	0.91	-4.51 [-6.17, -2.86]	-4.83 [-6.01, -3.64]	0.77
p-value	<0.001	<0.001		0.002	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
30s STS, repetitions	n=25	n=18		n=6	n=37		n=23	n=20		n=28	n=15		n=25	n=18	
Baseline	11.2±3.8	15.2	0.03	11.0±5.5	14.0±5.7	0.26	10.4±3.2	17.2±5.8	<0.001	11.3±3.6	17.8±6.2	<0.001	10.6±3.1	17.6±5.7	<0.001
Follow-up	13.9±3.8	18.7	0.01	14.5±3.9	17.1±6.2	0.33	14.0±3.6	19.8±1.5	0.001	14.3±3.7	21.2±6.7	<0.001	14.3±3.8	20.1±6.8	0.001
Change	2.67 [0.61, 4.73]	3.48 [1.70, 5.26]	0.54	3.50 [-0.28, 7.28]	3.08 [1.69, 4.48]	0.82	3.60 [2.05, 5.17]	2.60 [0.34, 4.86]	0.44	3.14 [1.64, 4.65]	3.13 [0.41, 5.85]	0.99	3.56 [2.05, 5.07]	2.56 [0.11, 5.00]	0.45
p-value	0.01	<0.001		0.13	0.0001		0.0001	0.0001		0.0002	0.03		0.0001	0.04	
Gait Speed, m/s	n=14	n=18		n=4	n=28		n=17	n=15		n=21	n=11		n=19	n=13	
Baseline	0.96±0.19	1.16±0.27	0.02	0.84±0.29	1.10±0.24	0.02	1.05±0.29	1.09±0.22	0.47	1.04±0.23	1.12±0.20	0.25	1.05±0.24	1.10±0.19	0.44
Follow-up	0.97±0.17	1.09±0.21	0.10	0.90±0.28	1.06±0.19	0.16	1.04±0.24	1.03±0.16	0.93	1.03±0.23	1.04±0.15	0.81	1.04±0.24	1.02±0.15	0.79
Change	0.01 [-0.04, 0.06]	-0.07 [-0.15, 0.01]	0.12	0.05 [-0.10, 0.01]	-0.06 [-0.04, 0.16]	0.16	0.01 [-0.09, 0.06]	0.06 [-0.13, 0.01]	0.32	0.01 [-0.05, 0.07]	0.09 [-0.01, 0.18]	0.14	0.01 [-0.06, 0.07]	0.08 [-0.005, 0.16]	0.17
p-value	0.73	0.09		0.16	0.09		0.75	0.09		0.78	0.08		0.84	0.06	
6MWT, m	n=13	n=18		n=4	n=26		n=15	n=15		n=20	n=11		n=18	n=13	0.01
Baseline	347.6±94.0	406.2±92.9	0.09	302.1±129.6	392.9±87.3	0.10	369.7±92.4	392.0±102.2	0.04	364.4±90.6	434.5±76.6	0.01	361.6±90.3	425.1±81.8	0.61
Follow-up	384.1±102.7	452.3±73.8	0.03	352.1±123.8	433.6±84.6	0.10	415.8±82.8	429.8±103.7	0.78	408.9±90.3	454.1±91.2	0.19	417.6±91.1	435.2±95.4	0.60
Change	36.5 [-0.65, 79.5]	46.1 [3.16, 89.1]	0.74	50.0 [-83.6, 183.6]	40.7 [9.27, 72.2]	0.83	46.1 [-2.6, 94.8]	37.9 [0.3, 75.4]	0.78	46.7 [8.6, 84.9]	33.7 [-17.9, 85.3]	0.67	48.7 [6.0, 91.4]	33.2 [-9.9, 76.2]	
p-value	0.09	0.04		0.32	0.01		0.07	0.049		0.02	0.18		0.03	0.12	
LLFDI	n=18	n=26		n=6	n=38		n=24	n=20		n=15	n=29		n=26	n=18	
Baseline	117.2	132.2±18.3	0.04	113.8±16.2	128.0±19.1	0.10	121.7±18.5	131.3±19.1	0.06	122.3±18.2	132.8±19.6	0.06	121.4±18.0	132.3±19.3	0.04
Follow-up	124.1	138.5±16.4	0.01	123.5±13.2	134.0±19.8	0.22	129.9±19.9	135.9±18.5	0.31	129.2±19.2	139.1±18.4	0.11	129.5±19.5	137.1±18.6	0.21
Change	6.8 [1.3, 12.4]	6.3 [2.3, 10.2]	0.85	9.7 [3.7, 15.6]	6.0 [2.5, 9.6]	0.42	8.2 [3.1, 13.2]	4.60 [1.0, 8.1]	0.25	7.69 [3.28, 12.1]	4.27 [0.59, 7.95]	0.30	8.0 [3.3, 12.6]	4.4 [0.5, 8.4]	0.27
p-value	0.02	0.003		0.01	0.001		0.003	0.02		0.001	0.03		0.002	0.03	
REAP-S	n=26	n=18		n=6	n=38		n=24	n=20		n=29	n=15		n=26	n=18	
Baseline	28.1±4.0	31.9±3.6	0.002	28.3±5.8	30.7±3.9	0.20	29.6±3.9	31.2±4.4	0.15	29.6±4.3	31.8±3.1	0.06	29.5±4.37	31.5±3.31	0.09

Follow-up	34.4±3.5	35.3±3.0	0.39	35.7±3.9	34.8±3.1	0.56	35.1±3.1	34.8±3.3	0.77	35.0±3.2	34.8±3.3	0.82	34.8±3.3	35.1±3.1	0.79
Change	6.3 [4.3, 8.3]	3.4 [1.8, 5.0]	0.02	7.3 [2.7, 12.0]	4.2 [2.9, 5.5]	0.08	5.5 [3.7, 7.2]	3.60 [1.7, 5.5]	0.14	5.62 [4.03, 7.21]	2.67 [0.74, 4.59]	0.02	5.3 [3.60, 7.0]	3.6 [1.6, 5.6]	0.19
p-value	<0.001	<0.001		0.01	<0.0001		<0.0001	0.001		<0.001	0.01		<0.001	0.001	
Fat Mass %	n=13	n=17		n=4	n=26		n=16	n=14							
Baseline	49.0±6.5	45.7±7.5	0.11	54.0±4.8	46.7±7.9	0.04	47.7±8.1	47.7±7.9	0.22	48.2±6.8	44.9±7.6	0.11	48.0±7.8	47.2±8.3	0.12
Follow-Up	47.4±8.1	44.6±7.8	0.34	50.8±5.3	45.0±8.1	0.18	45.9±8.5	45.6±7.6	0.92	46.6±7.9	44.1±8.3	0.02	46.0±8.00	45.5±8.2	0.86
Change	-2.5 [-4.0, -1.0]	-1.4 [-2.7, -0.1]	0.23	-3.3 [-1.7, 0.6]	-1.7 [-0.6, 2.7]	0.25	-1.7 [-3.0, -0.5]	-2.1 [-3.7, -0.4]	0.70	-1.99 [- 0.86, -3.11]	-1.66 [- 3.74, +0.42]	0.75	-2.00 [-3.19, - 0.81]	-1.69 [- 3.50, +0.11]	0.75
p-value	0.003	0.04		0.03	0.003		0.01	0.02		0.002	0.10		0.003	0.06	
SMM/wt, kg/kg	n=13	n=17		n=4	n=26		n=16	n=14		n=20	n=10		n=18	n=12	
Baseline	0.21±0.04	0.22±0.05	0.28	0.18±0.02	0.22±0.05	0.045	0.21±0.04	0.22±0.05	0.74	0.21±0.04	0.22±0.05	0.47	0.21±0.04	0.22±0.05	0.54
Follow-Up	0.22±0.05	0.23±0.05	0.73	0.19±0.03	0.23±0.05	0.23	0.22±0.06	0.22±0.04	0.81	0.22±0.05	0.23±0.05	0.68	0.22±0.05	0.22±0.05	0.89
Change	0.02 [0.003, 0.03]	0.01 [0.003, 0.02]	0.32	0.02 [0.01, 0.03]	0.01 [0.005, 0.02]	0.45	0.01 [0.0002, 0.02]	0.02 [0.01, 0.02]	0.39	0.01 [0.003, 0.02]	0.01 [0.01, 0.02]	0.78	0.01 [0.002, 0.02]	0.02 [0.01, 0.02]	0.64
p-value	0.02	0.005		0.01	0.002		0.054	<0.001		0.01	0.002		0.02	0.002	
VAT, L	n=11	n=17		n=3	n=24		n=13	n=14		n=18	n=10		n=16	n=12	
Baseline	5.76±2.86	4.23±2.16	0.03	4.30±1.45	4.40±2.35	0.37	5.29±2.76	3.55±1.22	0.02	5.52±2.84	3.74±1.48	0.02	5.51±2.81	4.06±1.99	0.045
Follow Up	3.93±1.86	3.33±1.55	0.37	3.80±1.71	3.58±1.72	0.80	4.34±2.06	2.93±0.87	0.04	3.83±1.95	3.08±0.90	0.26	4.03±1.97	2.94±0.93	0.09
Change	-1.01 [-2.2, 0.1]	-0.6 [-1.19, -0.1]	0.48	-0.50 [-1.5, 0.5]	-0.8 [-1.4, -0.2]	0.71	-1.0 [-1.9, 0.02]	-0.6 [-1.3, 0.02]	0.54	-0.94 [-1.60, -0.28]	-0.51 [-1.28, 0.28]	0.44	-0.92 [-1.75 -0.09]	-0.61 [-1.37, 0.15]	0.56
p-value	0.08	0.03		0.16	0.01		0.055	0.055		0.01	0.23		0.03	0.11	

Values represented as mean ± standard deviation, and change as mean difference [95% confidence intervals] with associated p-value. Abbreviations: 30STS: 30 second sit to stand test; 6MWT: 6-minute walk test; Kg: Kilogram; LLFDI: Late-Life Function and Disability Instrument; m: Meter; Non-SO: Non-Sarcopenic obesity; REAP-S: Rapid Eating and Activity Assessment for Patients short version; SMM – skeletal muscle mass, kg; VAT: Visceral Adipose Tissue

Sarcopenic obesity is defined as fulfilling the criteria as follows:

Definition #1: body fat %: males ≥31%, females ≥43%; Skeletal muscle mass %: males ≤37.6%, females ≤27.6%; grip strength: males ≤ 35.5kg, females ≤ 20 kg.

Definition #2: body fat %: males ≥31%, females ≥43%; Skeletal muscle mass %: males ≤37.6%, females ≤27.6%; grip strength: males ≤ 27 kg, females ≤ 16 kg

Definition #3: body fat %: males ≥31%, females ≥43%; Skeletal muscle mass %: males ≤37.6%, females ≤27.6%; Sit-to-stand: 65-69 y: ≤ 16; 70-74 y: ≤ 15; 75-79 y: ≤ 14; 80-84 y: ≤ 13; 85-89 y: ≤ 11 repetitions; females: Sit-to-Stand - 65-69 y: ≤ 15; 70-74 y: ≤ 14; 75-79 y: ≤ 13; 80-84 y: ≤ 12; 85-89 y: ≤ 11 repetitions.

Definition #4: body fat %: males ≥31%, females ≥43%; Skeletal muscle mass %: males ≤37.6%, females ≤27.6%; grip strength: males ≤ 35.5kg, females: Grip Strength ≤ 20 kg. OR Sit-to-stand: 65-69 y: ≤ 16; 70-74 y: ≤ 15; 75-79 y: ≤ 14; 80-84 y: ≤ 13; 85-89 y: ≤ 11 repetitions; females: Sit-to-Stand - 65-69 y: ≤ 15; 70-74 y: ≤ 14; 75-79 y: ≤ 13; 80-84 y: ≤ 12; 85-89 y: ≤ 11 repetitions

Definition #5 Definition #1: body fat %: males ≥31%, females ≥43%; Skeletal muscle mass %: males ≤37.6%, females ≤27.6%; grip strength: males ≤ 35.5kg, females ≤ 20 kg OR Sit-to-stand: 65-69 y: ≤ 16; 70-74 y: ≤ 15; 75-79 y: ≤ 14; 80-84 y: ≤ 13; 85-89 y: ≤ 11 repetitions; females: Sit-to-Stand - 65-69 y: ≤ 15; 70-74 y: ≤ 14; 75-79 y: ≤ 13; 80-84 y: ≤ 12; 85-89 y: ≤ 11 repetitions

Supplementary Figure #1 – Consort Diagram Flow for Intervention