Supplemental Table 1a. Characteristics of participants by BMI-defined sarcopenic obesity

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Robust  (n=487) | sarcopenia  (n=117) | obesity  (n=154) | sarcoobesity (n=7) | *p* |
| Continuous variables a |  |  |  |  |  |
| Age (yrs) | 71.93±6.81 | 77.91±7.74 | 73.25±7.26 | 83.29±8.99 | <0.001 |
| BMI (kg/m2 ) | 23.47±2.21 | 21.83±2.43 | 29.47±2.23 | 28.48±1.38 | <0.001 |
| Waist circumference (cm) | 78.69±8.14 | 76.37±8.62 | 91.4±8.26 | 90.15±4.28 | <0.001 |
| HDL (mg/dL) | 57.25±14.56 | 58.24±14.76 | 50.92±11.94 | 49.5±13.48 | <0.001 |
| LDL (mg/dL) | 110.53±29.97 | 105.83±28.28 | 106.94±27.93 | 107.25±15.2 | 0.364 |
| Uric acid (mg/dL) | 5.51±1.29 | 5.45±1.31 | 6.12±1.45 | 6.38±1.88 | <0.001 |
| TG (mg/dL) | 109.3±55.29 | 107.01±49.82 | 127.06±57.49 | 131.75±16.72 | 0.004 |
| Fasting Sugar (mg/dL) | 99.9±17.25 | 102.02±25.93 | 108.6±26.25 | 92.25±4.03 | <0.001 |
| SBP (mmHg) | 130.28±16.05 | 130.44±16.32 | 136.82±14.69 | 135±29.47 | <0.001 |
| 5STS test (sec) | 11.6±5.15 | 14.49±5.49 | 12.92±4.95 | 24.19±6.49 | <0.001 |
| Grip strength (kg) | 26.9±8.81 | 17.06±5.45 | 26.71±9.41 | 12.86±11.78 | <0.001 |
| Gait speed (m/s) | 1.26±0.34 | 0.98±0.32 | 1.09±0.36 | 0.75±0.39 | <0.001 |
| Physical activity | 8938.69±3070.05 | 8390.93±2600.53 | 8504.23±2601.92 | 8974.86±1787.68 | 0.177 |
| SMI | 6.66±0.97 | 5.51±0.88 | 7.43±1.15 | 4.28±2.99 | <0.001 |
| Fat mass (kg) | 17.57±4.64 | 16.8±4.93 | 27.48±5.32 | 28.78±3.49 | <0.001 |
| Body fat (%) | 29.18±6.64 | 31.78±7.15 | 37.26±6.72 | 44.1±3.68 | <0.001 |
| Categorical variables b |  |  |  |  |  |
| Male | 207(42.9) | 38(32.5) | 76(49.4) | 2(28.6) | 0.039 |
| Smoker | 11(2.3) | 0(0) | 7(4.5) | 0(0) | 0.387 |
| Alcohol≧4 /month | 32(6.7) | 1(0.9) | 19(12.3) | 0 | 0.017 |
| Metabolic syndrome | 79(17.2) | 21(20.2) | 79(54.9) | 2(50) | <0.001 |
| Hypertension | 154(31.9) | 51(43.6) | 92(59.7) | 3(42.9) | <0.001 |
| Diabetes | 61(12.7) | 17(14.5) | 30(19.5) | 1(14.3) | 0.376 |
| Arthritis | 102(21.1) | 31(26.5) | 44(28.6) | 2(28.6) | 0.229 |
| Osteoporosis | 89(18.4) | 28(23.9) | 24(15.6) | 1(14.3) | 0.704 |
| Use of anti-psychotics | 7(1.4) | 5(4.3) | 2(1.3) | 1(14.3) | 0.018 |
| Use of sedative agents | 99(20.5) | 28(23.9) | 24(15.6) | 2(28.6) | 0.336 |
| History of Fall | 31(10.5) | 15(22.1) | 12(12.6) | 2(33.3) | 0.032 |

aValues in the continuous variables were expressed as mean (standard deviation) unless otherwise specified.

b Values in the categorical variables were expressed as number (percent).

BMI, body mass index; HDL, high-density lipoprotein; LDL, low-density lipoprotein; TG, triglyceride; SBP, systolic blood pressure; 5STS, 5-times sit to stand up; SMI, skeletal muscle mass index.

Supplemental Table 1b. Characteristics of participants by body fat percentage-defined sarcopenic obesity

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Robust  (n=185) | Sarcopenia (n=35) | Obsesity (n=455) | Sarcoobesity  (n=90) | *p* |
| Continuous variables a |  |  |  |  |  |
| Age (yrs) | 71.61±6.95 | 79.8±8.98 | 72.56±6.94 | 77.64±7.34 | <0.001 |
| BMI (kg/m2 ) | 22.43±2.52 | 20.23±2.96 | 25.94±3.17 | 22.95±2.41 | <0.001 |
| Waist circumference (cm) | 76.88±9.42 | 71.69±8.62 | 83.8±9.37 | 78.98±8.32 | <0.001 |
| HDL (mg/dL) | 57.95±14.62 | 60.1±14.17 | 54.79±13.97 | 56.92±14.93 | 0.027 |
| LDL (mg/dL) | 108.62±28.35 | 101.47±25.81 | 110.03±29.93 | 107.15±28.66 | 0.412 |
| Uric acid (mg/dL) | 5.62±1.39 | 5.53±1.32 | 5.66±1.34 | 5.48±1.34 | 0.724 |
| TG (mg/dL) | 95.87±44.43 | 91.63±43.99 | 120.75±58.86 | 113.63±49.82 | <0.001 |
| Fasting Sugar (mg/dL) | 99.55±14.51 | 99.9±24.95 | 102.95±21.82 | 102.46±25.72 | 0.311 |
| SBP (mmHg) | 130.21±16.13 | 124.87±15.37 | 132.58±15.84 | 132.5±16.95 | 0.037 |
| 5STS test (sec) | 11.19±4.54 | 14.1±4.99 | 12.19±5.31 | 14.91±5.89 | <0.001 |
| Grip strength (kg) | 29.96±9.29 | 16.37±6.96 | 25.55±8.5 | 16.87±5.68 | <0.001 |
| Gait speed (m/s) | 1.35±0.36 | 0.96±0.29 | 1.17±0.33 | 0.97±0.33 | <0.001 |
| Physical activity | 9145.42±3540.46 | 8947.47±2443.79 | 8692.09±2692.76 | 8234.02±2578.09 | 0.086 |
| SMI | 6.92±1.28 | 4.94±1.95 | 6.82±0.96 | 5.57±0.69 | <0.001 |
| Fat mass (kg) | 13.53±3.74 | 11.15±3.22 | 22.57±5.33 | 19.41±4.3 | <0.001 |
| Body fat (%) | 22.43±3.76 | 22.92±5.21 | 34.64±5.48 | 35.52±4.96 | <0.001 |
| Categorical variables b |  |  |  |  |  |
| Male | 114(61.6) | 12(34.3) | 171(37.6) | 28(31.1) | <0.001 |
| Smoker | 5(2.7) | 0(0) | 13(2.9) | 0(0) | 0.423 |
| Alcohol≧4 /month | 15(8.1) | 0(0) | 36(7.9) | 1(1.1) | 0.121 |
| Metabolic syndrome | 20(11.6) | 2(6.7) | 139(32.1) | 21(26.6) | <0.001 |
| Hypertension | 62(33.5) | 5(14.3) | 185(40.7) | 50(55.6) | 0.001 |
| Diabetes | 17(9.2) | 6(17.1) | 75(16.5) | 13(14.4) | 0.180 |
| Arthritis | 31(16.8) | 14(40) | 115(25.3) | 19(21.1) | 0.066 |
| Osteoporosis | 37(20) | 10(28.6) | 76(16.7) | 19(21.1) | 0.603 |
| Use of anti-psychotics | 0(0) | 2(5.7) | 9(2) | 4(4.4) | 0.010 |
| Use of sedative agents | 30(16.2) | 6(17.1) | 95(20.9) | 24(26.7) | 0.214 |
| History of Fall | 8(7.5) | 5(22.7) | 35(12.2) | 12(22.6) | 0.026 |

aValues in the continuous variables were expressed as mean (standard deviation) unless otherwise specified.

b Values in the categorical variables were expressed as number (percent).

BMI, body mass index; HDL, high-density lipoprotein; LDL, low-density lipoprotein; TG, triglyceride; SBP, systolic blood pressure; 5STS, 5-times sit to stand up; SMI, skeletal muscle mass index;