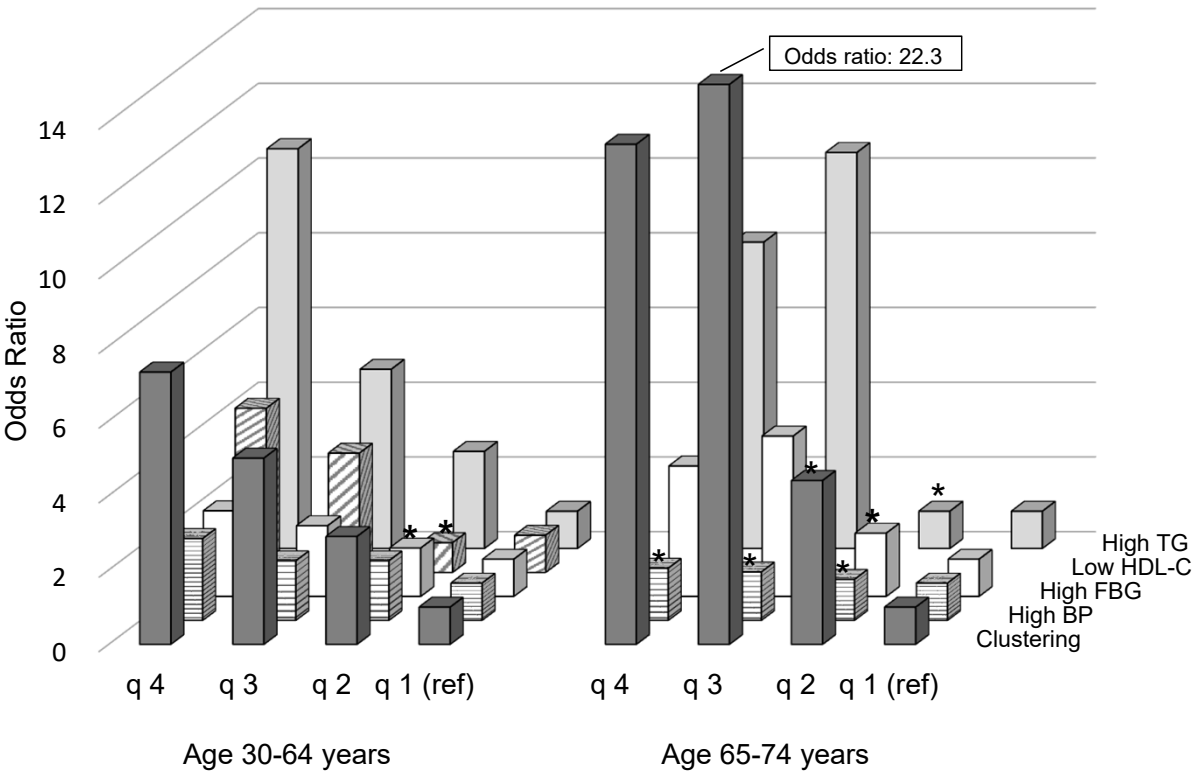
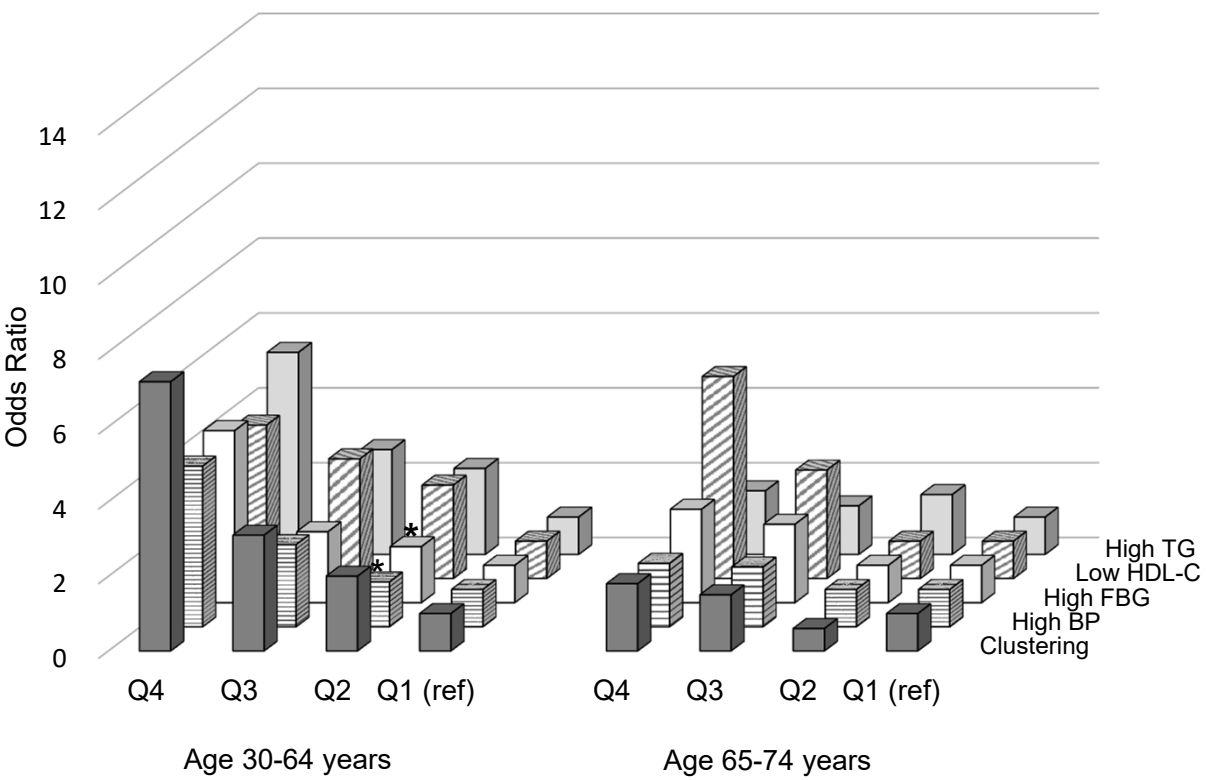


BMI 18.5-22.9 kg/m<sup>2</sup>



BMI ≥ 23.0 kg/m<sup>2</sup>



Supplementary Table S1.

Odds ratios and 95% confidence intervals adjusted for age and having medical treatment of hypercholesterolemia.

	BMI 18.5-22.9 kg/m <sup>2</sup>				BMI ≥ 23.0 kg/m <sup>2</sup>			
	q1	q2	q3	q4	Q1	Q2	Q3	Q4
Clustering	ref	3.42 (1.46-8.04)	6.29 (2.79-14.17)	9.35 (4.22-20.68)	ref	1.73 (1.16-2.58)	2.64 (1.79-3.88)	6.00 (4.12-8.76)
High BP	ref	1.57 (1.08-2.29)	1.50 (1.03-2.17)	2.12 (1.49-3.02)	ref	1.26 (0.90-1.77)	2.18 (1.56-3.04)	3.90 (2.77-5.48)
High TG	ref	2.93 (1.30-6.62)	6.00 (2.79-12.9)	12.00 (5.69-25.31)	ref	2.19 (1.46-3.29)	2.88 (1.93-4.29)	4.97 (3.37-7.35)
Low HDL-C	ref	0.83 (0.25-2.74)	3.66 (1.46-9.18)	5.23 (2.11-12.94)	ref	2.09 (1.16-3.80)	2.85 (1.60-5.10)	3.93 (2.23-6.93)
High FBG	ref	1.48 (0.80-2.74)	2.19 (1.23-3.90)	2.42 (1.39-4.24)	ref	1.45 (0.94-2.25)	1.79 (1.17-2.73)	4.13 (2.76-6.17)

Clustering is defined as having two or more risks of high BP, high FBG, low HDL-C, and high TG. Mets, metabolic syndrome; BMI, body mass index; VFA, visceral fat area; BP, blood pressure; FBG, fasting blood glucose; HDL-C, high-density lipoprotein cholesterol; TG, triglycerides.

Supplementary Table S2.

Percentages of participants having metabolic syndrome components according to BMI and VFA among participants without liver or renal disease, thyroid disease, tumors or psychiatric disease based on self-report.

	Normal weight (BMI 18.5–22.9 kg/m <sup>2</sup> )				Higher weight (BMI ≥ 23.0 kg/m <sup>2</sup> )			
	VFA				VFA			
	q1	q2	q3	q4	Q1	Q2	Q3	Q4
<b>Men</b>								
<i>n</i>	158	155	159	156	189	189	190	189
case, %								
Clustering	1.9	11.6	14.5	23.1	15.9	28.0	34.2	59.3
Mets components								
High BP	15.8	26.5	27.7	40.4	33.9	34.9	46.3	65.6
High FBG	5.1	10.3	13.2	21.8	15.3	20.1	23.2	46.0
Low HDL-C	1.9	1.9	1.9	5.8	4.2	9.0	13.2	13.2
High TG	4.4	9.7	17.0	32.1	17.5	32.8	32.6	48.7
<b>Women</b>								
<i>n</i>	203	207	207	204	80	80	80	80
case, %								
Clustering	1.5	1.0	4.3	10.8	8.8	10.0	25.0	37.5
Mets components								
High BP	10.3	12.1	12.6	28.3	16.3	30.0	52.5	56.3
High FBG	3.0	1.9	4.8	7.4	5.0	10.0	12.5	23.8
Low HDL-C	1.5	1.0	5.8	6.9	3.8	17.5	16.3	27.5
High TG	0.5	1.4	3.4	9.3	3.8	7.5	17.5	30.0

Quartiles for normal weight are q1–q4 (quartile points are 43.3, 56.2 and 70.8 in men, and 28.4, 39.1 and 50.3 in women, respectively), and for higher weight are Q1–Q4 (quartile points are 70.6, 87.9 and 108.6 in men, and 47.5, 66.4 and 85.7 in women, respectively). Clustering is defined as having two or more risks of high BP, high FBG, low HDL-C, and high TG. Mets, metabolic syndrome; BMI, body mass index; VFA, visceral fat area; BP, blood pressure; FBG, fasting blood glucose; HDL-C, high-density lipoprotein cholesterol; TG, triglycerides.

Supplementary Table S3.

Percentages of participants having metabolic syndrome components according to BMI and VFA by age.

	Normal weight (BMI 18.5–22.9 kg/m <sup>2</sup> )				Higher weight (BMI ≥ 23.0 kg/m <sup>2</sup> )			
	VFA				VFA			
	q1	q2	q3	q4	Q1	Q2	Q3	Q4
<b>Age 30-64 years</b>								
<i>n</i>	402	408	406	404	301	303	302	302
case, %								
Clustering	1.7	5.1	9.1	15.1	12	22.1	31.5	51.3
Mets components								
High BP	11.9	18.9	20.2	30.2	27.2	33	47.7	63.6
High FBG	4	5.6	8.4	12.6	10.6	16.2	20.2	37.7
Low HDL-C	1.5	1.2	4.7	6.4	5	11.2	13.2	16.2
High TG	2	5.1	9.1	18.8	12.6	24.8	27.8	42.7
<b>Age 65-74 years</b>								
<i>n</i>	39	39	41	39	34	34	34	34
case, %								
Clustering	2.6	10.3	36.6	25.6	41.2	29.4	50	55.9
Mets components								
High BP	46.2	48.7	53.7	53.8	64.7	64.7	76.5	76.5
High FBG	7.7	12.8	26.8	23.1	32.4	32.4	47.1	52.9
Low HDL-C	0	2.6	4.9	5.1	2.9	2.9	8.8	14.7
High TG	2.6	2.6	22	17.9	20.6	29.4	23.5	29.4

Quartiles for normal weight are q1–q4 (quartile points (men/women) are 42.9, 55.5, 71.1 / 28.3, 38.2, 49.6 in age 30–64 years, and 48.7, 62.9, 77.2 / 38.9, 51.9, 64.3 in age 64–75 years, respectively), and for higher weight are Q1–Q4 (quartile points (men/women) are 70.4, 87.7, 108.0 / 47.0, 65.8, 84.0 in age 30–64 years, and 78.5, 98.2, 120.2 / 64.0, 78.9, 97.0 in age 64–75 years, respectively). Clustering is defined as having two or more risks of high BP, high FBG, low HDL-C, and high TG. Mets, metabolic syndrome; BMI, body mass index; VFA, visceral fat area; BP, blood pressure; FBG, fasting blood glucose; HDL-C, high-density lipoprotein cholesterol; TG, triglycerides.

Supplementary Table S4.

Independent lifestyle factors for VFA selected by multiple stepwise regression analysis.

	$\beta$ (95% CIs)	P-value	R <sup>2</sup>
<b>Men</b>			
<b>Normal weight</b>			
Age	0.51 (0.37, 0.65)	<0.001	0.086
Exercise habits	-1.94 (-3.11, -0.78)	0.001	
Drinking habits	4.50 (1.27, 7.72)	0.006	
Smoking habits	1.98 (0.13, 3.84)	0.036	
<b>Higher weight</b>			
Age	0.59 (0.39, 0.78)	<0.001	0.066
Eating until full	7.94 (3.30, 12.57)	0.001	
Exercise habits	-4.29 (-5.79, -2.78)	<0.001	
<b>Women</b>			
<b>Normal weight</b>			
Age	0.50 (0.40, 0.60)	<0.001	0.090
Eating quickly	2.76 (0.78, 4.74)	0.006	
<b>Higher weight</b>			
Age	0.66 (0.38, 0.94)	<0.001	0.069
Eating quickly	6.38 (0.92, 11.83)	0.022	
Eating until full	7.06 (0.31, 13.8)	0.040	

Values are shown as regression coefficients ( $\beta$ ) with a 95% confidence interval (CI) and adjusted R square (R<sup>2</sup>). The independent variables in the regression models were coded as the following: exercise habits (0 min/week=1, 1–59 min/week=2 and  $\geq 60$  min/week=3), drinking habits (never+quit=1 and current=2), smoking habits (never=1, quit=2 and current=3), eating quickly (no=1 and yes=2), eating until full (no=1, yes=2). VFA, visceral fat area.