Supplemental Table 1 Socioeconomic structures of all permanent residents of Luohu district and Shenzhen city in 2018

	Luohu district (n=103.99×10⁴)	Shenzhen city (n=1302.66×10⁴)
Sex (n, %)		
male	559,952 (53.85)	7,250,711 (55.66)
female	479,948 (46.15)	5,775,877 (44.34)
Age (years, (n, %))		
0-14	139,625 (13.43)	1,569,745 (13.03)
15-59	826,107 (79.44)	10,878,040 (83.51)
60-	74,168 (7.13)	578,803 (4.44)
Education level (n, %)		
Illiteracy	8735 (0.84)	96,379 (0.74)
Primary school	111,477 (10.72)	1,217,936 (9.34)
High school	814,554 (78.33)	10,612,306 (81.47)
University	105,134 (10.11)	1,099,967 (8.44)
Annual per capita disposable income (RMB)	60,595	57,543
Total assets (100 million RMB)	4702	47120

Data on the demographics of the permanent residents were presented.

Supplemental Table 2. Comparisons of the distributions of age and sex among elderly permanent residents in Shenzhen city, Luohu district and our cohort

	Shenzhen Aging-Related Disorder cohort	Luohu district	Shenzhen city
Sex (n, %)			
male	4022 (42.73)	37,492 (50.55)	290,001 (50.10)
female	5389 (57.26)	36,676 (49.45)	288,802 (49.90)
Age (years, (n, %))			
60-69	6416 (68.18)	48,937 (65.98)	394,769 (68.20)
≥70	2995 (31.82)	25,231 (34.02)	184,034 (31.80)

Supplemental Table 3　The list of biochemichal analysis of biosamples at baseline in the Shenzhen Aging-Related Disorder Cohort

Categories	Measurements
Blood routine	white blood cell counts (WBC), red blood cell counts (RBC), hemoglobin contents, platelet counts
Lipid levels	total cholesterol (TCHO), triglyceride (TG), low density lipoprotein cholesterol (LDL-C) and high density lipoprotein cholesterol (HDL-C)
Blood glucose	fasting plasma glucose, glycated hemoglobin
Homocysteine	
Hepatic function	total protein, albumin, total bilirubin (TB), alanine aminotransferase (ALT) and aspartate aminotransferase (AST)
Kidney function	creatinine, uric acid and urea nitrogen
Tumor biomarkers	carcino-embryonic antigen (CEA) and alpha fetoprotein (AFP)
Epstein-Barr Virus (EBV) antibody	
Urine routine	urine glucose, urine bilirubin, urine ketone, urine specific gravity, pH, urine protein, urobilinogen qualitative, urine nitrite, urine WBC, urine latent blood
Urine metals	lithium, beryllium, aluminum, titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper, zinc, arsenic, selenium, rubidium, strontium, molybdenum, cadmium, indium, tin, antimony, barium, thallium, lead
Urine nicotine and its metabolites	nicotine, cotinine, trans-3'-hydroxy cotinine, nicotine-N-β-glucuronide, cotinine N-β-D-glucuronide, trans-3'-hydroxy cotinine O- β -D-glucuronide, (R,S)-nornicotine, (R,S)-norcotinine, (1'S,2'S)-nicotine-1'-oxide, (S)-cotinine N-Oxide, rac 4-Hydroxy-4-(3-pyridyl) butanoic Acid Dicyclohexylamine Salt

Supplemental Table 4   Summary of the instruments messages for clinical indicators analysis at baseline

Items	Equipment used
Standing height	HNH-219, OMRON Healthcare Co., Ltd, Japan
Body weight	HNH-219, OMRON Healthcare Co., Ltd, Japan
Resting blood pressure	HBP-1300, OMRON Healthcare Co., Ltd, Japan
12-lead electrocardiography	ECG-1350c, Nihon Kohden Corporation, Japan
Chest X-ray	Optimus, Royal Dutch Philips Electronics Ltd., Netherlands
Abdominal B-type ultrasound inspection	Affiniti50, Royal Dutch Philips Electronics Ltd., Netherlands
	EPIQ5, Royal Dutch Philips Electronics Ltd., Netherlands
	S25, SonoScape Medical Corp., Guangdong, China
Fasting plasma glucose	7600-010, Hitachi, Ltd., Tokyo, Japan
Glycated hemoglobin	Premier Hb9210, Trinity Biotech Plc., Bray, Ireland
Homocysteine	AU5800, Beckman Coulter, Inc., California, USA
Blood lipids	7600-010, Hitachi, Ltd., Tokyo, Japan
Hepatic function	7600-010, Hitachi, Ltd., Tokyo, Japan
Renal function	7600-010, Hitachi, Ltd., Tokyo, Japan
Blood routine	XT-1800I, SYSMEX Corporation, Japan
EB virus	Uranus AE100, Aikang Medtech Co., Ltd, China
Tumor biomarkers	Uranus AE100, Aikang Medtech Co., Ltd, China
Urine routine	URIT-500B, URIT Medical Electronic Group Co., China
Bone mineral density	MetriScan, Miles Medical Inc., California, USA
	BMD-1000D, Hongyang Medical Apparatus Co., Ltd, China

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Body water	Inbody 570, InBody Co., Ltd, Seoul, Korea
Body protein	Inbody 570, InBody Co., Ltd, Seoul, Korea
Body minerals	Inbody 570, InBody Co., Ltd, Seoul, Korea
Body muscle	Inbody 570, InBody Co., Ltd, Seoul, Korea
Skeletal muscle mass	Inbody 570, InBody Co., Ltd, Seoul, Korea
Body fat	Inbody 570, InBody Co., Ltd, Seoul, Korea
Body cell count	Inbody 570, InBody Co., Ltd, Seoul, Korea
Basal metabolic rata	Inbody 570, InBody Co., Ltd, Seoul, Korea
Waist circumference	Inbody 570, InBody Co., Ltd, Seoul, Korea
Hip circumference	Inbody 570, InBody Co., Ltd, Seoul, Korea
Bio-electrical impedance	Inbody 570, InBody Co., Ltd, Seoul, Korea
Urine metals	NEXION 300X PerkinElmer Inc., USA
Urine nicotine and its metabolite	1200 series/ 6410 Triple Quad LC/MS Agilent Technologies Inc., California, USA

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Supplemental Table 5   Comparisons between the individuals with and without body component data at baseline

Variables	Participants with body component (n=3292)	Participants without body component (n=6119)	t/x^{2*}	P
Age (years, mean±SD)	67.54±5.25	67.83±5.50	2.56	0.01
Male (n, %)	1327 (40.31)	2695 (44.04)	12.19	0.0005
Han Chinese (n, %)	2954 (99.29)	5623 (99.36)	0.14	0.70
Education level (n, %)			4.01	0.26
Primary school or illiteracy	547 (16.79)	1090 (17.97)		
Middle school	913 (28.03)	1651 (27.23)		
High school	1081 (33.19)	2062 (34.00)		
University or college or higher	716 (21.98)	1261 (20.79)		
Marital status (n, %)			7.74	0.10
Single	14 (0.43)	32 (0.53)		
Married	2825 (87.60)	5220 (86.86)		
Widowed	336 (10.42)	687 (11.43)		
Divorced	48 (1.49)	71 (1.18)		
Cohabited	2 (0.06)	0		
Ever smoker (n, %)	643 (19.64)	1257 (20.69)	1.45	0.23
Passive smoker (n, %)	380 (11.63)	674 (11.11)	0.57	0.45
Ever drinker (n, %)	485 (14.82)	866 (14.25)	0.55	0.46
Pittsburgh Sleep Quality Index (n, mean ± SD)	4.33 ± 2.60	4.12 ± 2.61	-3.41	0.0006
Physical active (n, %)	2664 (81.24)	4924 (81.28)	0.002	0.97
Overweight/Obesity[a] (n, %)	1836 (56.04)	3225 (53.47)	5.65	0.02

Hypertension[b] (n, %)	1846 (56.26)	3630 (59.58)	9.64	0.002
Diabetes mellitus[c] (n, %)	732 (22.44)	1351 (22.23)	0.06	0.81
Hyperlipidemia[d] (n, %)	2460 (75.07)	4637 (75.79)	1.04	0.31
Chronic bronchitis[e] (n, %)	46 (1.41)	90 (1.48)	0.08	0.78
COPD[e] (n, %)	4 (0.12)	14 (0.23)	1.29	0.26
Asthma[e] (n, %)	15 (0.46)	26 (0.43)	0.05	0.83
Tuberculosis[e] (n, %)	15 (0.46)	23 (0.38)	0.35	0.55
Angina[e] (n, %)	13 (0.40)	23 (0.38)	0.02	0.88
Myocardial infarction[e] (n, %)	13 (0.40)	38 (0.63)	2.00	0.16
Coronary heart disease[e] (n, %)	203 (6.24)	327 (5.39)	2.84	0.09
Stroke[e] (n, %)	30 (0.92)	72 (1.19)	1.36	0.24
Cancer[e] (n, %)	80 (2.47)	123 (2.03)	1.89	0.17
Chronic hepatitis[e] (n, %)	18 (0.55)	29 (0.48)	0.24	0.62
Arthritis[e] (n, %)	138 (4.25)	331 (5.46)	6.48	0.01
Migraine[e] (n, %)	20 (0.62)	38 (0.63)	0.004	0.95
Nephritis[e] (n, %)	9 (0.28)	27 (0.45)	1.56	0.21
Alzheimer's disease[e] (n, %)	6 (0.18)	11 (0.18)	0.001	0.97
Parkinson's disease[e] (n, %)	8 (0.25)	13 (0.21)	0.10	0.76
Brain injury[e] (n, %)	193 (5.96)	340 (5.64)	0.40	0.53
MMSE score < 24 (n, %)	167 (5.48)	301 (5.35)	0.07	0.79
Depression status[f] (n, %)	126 (3.87)	177 (2.95)	5.63	0.02
ADL (n, scores, mean ± SD)	14.09 ± 1.23	14.18 ± 1.73	2.82	0.005

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SSRS (n, score, mean ± SD)	39.88 ± 7.68	39.36 ± 8.00	-2.88	0.004

ADL, activities of daily living; COPD, chronic obstructive pulmonary disease; MMSE, Mini-mental State Examination; SSRS, Social support rate scale; SD, standard deviation.

[*] Student's t-test and Pearson x^2 test wer used for the comparisons between continuous variables and the categorical variables, respectively.

[a] Overweight/Obesity was defined as BMI at least 24 kg/m^2.

[b] Hypertension was defined as diastolic blood pressure (DBP) ≥90mmHg and / or systolic blood pressure (SBP) ≥140mmHg, or self-reported hypertension diagnosed by a physician, or taking antihypertension drugs.

[c] Diabetes was defined as fasting blood glucose value ≥7.0 mmol/l or antidiabetic therapy, or self-reported diabetes diagnosed by a physician, or taking hypoglycemic agent or insulin.

[d] Dyslipidemia was defined as TCHO ≥5.18 mmol/L, or TG ≥1.7 mmol/L, or HDL-C <1.0 mmol/L, or LDL-C ≥3.37 mmol/L or self-reported hyperlipidemia diagnosis by a physician, or taking lipid-lowering drugs.

[e] The disease was defined as self-reported disease.

[f] Depression was defined as having at least 16 scores in the Center for Epidemiologic Studies Depression Scale.