

Electronic Supplementary Material (ESM)

The prevalence of cardiovascular disease in adults with type 2 diabetes in China: results from the cross-sectional CAPTURE study

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ESM — Methods

Definition of cardiovascular disease diagnoses in the CAPTURE study

Cardiovascular disease (CVD) was defined as any diagnosis of coronary heart disease (CHD), carotid artery disease, cerebrovascular disease, cardiac arrhythmia, peripheral artery disease, heart failure or aortic disease.

Atherosclerotic cardiovascular disease (ASCVD) was defined as any diagnosis of CHD, carotid artery disease, cerebrovascular disease or peripheral artery disease.

CHD was defined as any diagnosis of myocardial infarction, stable coronary artery disease (angina pectoris), other ischemic heart disease or past revascularization procedure.

Cerebrovascular disease was defined as any diagnosis of ischemic stroke, hemorrhagic stroke, unspecified stroke or transient ischemic attack.

Cardiac arrhythmia and conduction abnormalities were defined as any diagnosis of atrial fibrillation, atrial flutter, supraventricular tachycardia, ventricular tachycardia, ventricular fibrillation or bradyarrhythmia (sinus node dysfunction or atrioventricular block).

Peripheral artery disease was defined as any diagnosis of asymptomatic PAD (low ankle-brachial index <0.90 or pulse abolition), claudication, limb ischemia or non-traumatic amputation.

Heart failure was defined as any diagnosis of symptomatic heart failure (New York Heart Association [NYHA] group II–IV; left ventricular ejection fraction [LVEF] <40%, 40% to <50%, or ≥50%), asymptomatic heart failure (NYHA group I with LVEF <40%, 40% to <50%, ≥50%, or unknown) or hospitalization for heart failure.

Aortic disease was defined as any diagnosis of aortic dissection, aortic aneurysm or thromboembolic aortic disease.

ESM — Table 1. List of Independent Ethics Committees/Institutional Review Boards for the CAPTURE China study

Site No.	Investigator name	Independent Ethics Committee/Institutional Review Board name
601	Prof Tianpei Hong	Ethics Committee of Peking University Third Hospital
602	Dr Wei Tang	Ethics Committee of Jiangsu Province Official Hospital (Geriatric Hospital of Nanjing Medical University)
603	Dr Li Li	Ethics Committee of Ningbo First Hospital
604	Dr Qin Wan	Ethics Committee of Southwest Medical University Affiliated Hospital
605	Dr Hui Wan	Ethics Committee of Wuxi No. 2 People's Hospital (The study was approved but not started)
606	Dr Lin Qiao	Ethics Committee of Affiliated Hospital of Guiyang Medical College (The study was approved but not started)
607	Dr Lin Qi	Ethics Committee of Beijing Yanhua Hospital
608	Dr Zongxun Yan	Ethics Committee of Affiliated Hospital of North Sichuan Medical College
610	Dr Jiangong Ren	Medical Ethics Committee of Lanzhou University Second Hospital
611	Dr Jianhua Ye	Ethics Committee of the First Affiliated Hospital with Guangdong Pharmaceutical University
612	Dr Mingjun Gu	Ethics Committee of Shanghai Pudong New Area Gongli Hospital (The study was approved but not started)

ESM — Table 2. Use of GLAs in the CAPTURE study population stratified by CVD status in China in 2019

	Study population <i>n</i> = 805	By CVD status		
		CVD <i>n</i> = 273	Non-CVD <i>n</i> = 532	ASCVD <i>n</i> = 259
Any glucose-lowering agent				
Yes	779 (96.8)	270 (98.9)	509 (95.7)	256 (98.8)
No	26 (3.2)	3 (1.1)	23 (4.3)	3 (1.2)
Oral antidiabetic drug				
Any	713 (88.6)	243 (89.0)	470 (88.3)	231 (89.2)
Biguanide	509 (63.2)	153 (56.0)	356 (66.9)	148 (57.1)
DPP-4 inhibitor	199 (24.7)	77 (28.2)	122 (22.9)	72 (27.8)
Sulfonylurea	227 (28.2)	67 (24.5)	160 (30.1)	64 (24.7)
SGLT2 inhibitor	43 (5.3)	16 (5.9)	27 (5.1)	14 (5.4)
Alpha glucosidase inhibitor	329 (40.9)	143 (52.4)	186 (35.0)	136 (52.5)
Thiazolidinedione	81 (10.1)	20 (7.3)	61 (11.5)	20 (7.7)
Glinide	57 (7.1)	26 (9.5)	31 (5.8)	25 (9.7)
Other	33 (4.1)	13 (4.8)	20 (3.8)	12 (4.6)
Insulin				
Any	313 (38.9)	151 (55.3)	162 (30.5)	146 (56.4)
Basal	185 (23.0)	91 (33.3)	94 (17.7)	90 (34.7)
Mealtime	186 (23.1)	96 (35.2)	90 (16.9)	92 (35.5)
GLP-1 RA	31 (3.9)	4 (1.5)	27 (5.1)	4 (1.5)
Monotherapy				
Any	206 (25.6)	62 (22.7)	144 (27.1)	56 (21.6)
Biguanide	71 (8.8)	13 (4.8)	58 (10.9)	12 (4.6)
Insulin (any)	62 (7.7)	27 (9.9)	35 (6.6)	25 (9.7)
DPP-4 inhibitor	17 (2.1)	5 (1.8)	12 (2.3)	3 (1.2)
Sulfonylurea	15 (1.9)	5 (1.8)	10 (1.9)	5 (1.9)
SGLT2 inhibitor	2 (0.2)	0	2 (0.4)	0
GLP-1 RA	4 (0.5)	0	4 (0.8)	0

Dual therapy				
Any	252 (31.3)	83 (30.4)	169 (31.8)	82 (31.7)
Biguanide and insulin (any)	36 (4.5)	11 (4.0)	25 (4.7)	11 (4.2)
Biguanide and alpha glucosidase inhibitor	33 (4.1)	12 (4.4)	21 (3.9)	11 (4.2)
Biguanide and DPP-4 inhibitor	27 (3.4)	6 (2.2)	21 (3.9)	6 (2.3)
Biguanide and sulfonylurea	44 (5.5)	8 (2.9)	36 (6.8)	8 (3.1)
Biguanide and SGLT2 inhibitor	2 (0.2)	1 (0.4)	1 (0.2)	1 (0.4)
Biguanide and glinide	6 (0.7)	2 (0.7)	4 (0.8)	2 (0.8)
Biguanide and thiazolidinedione	5 (0.6)	0	5 (0.9)	0
Biguanide and GLP-1 RA	4 (0.5)	1 (0.4)	3 (0.6)	1 (0.4)
SGLT2 inhibitor and insulin (any)	2 (0.2)	2 (0.7)	0	2 (0.8)
GLP-1 RA and other OADs	1 (0.1)	0	1 (0.2)	0
Triple therapy,				
Any	206 (25.6)	78 (28.6)	128 (24.1)	71 (27.4)
Biguanide and sulfonylurea and DPP-4 inhibitor	26 (3.2)	5 (1.8)	21 (3.9)	5 (1.9)
Biguanide and DPP-4 inhibitor and insulin (any)	8 (1.0)	5 (1.8)	3 (0.6)	5 (1.9)
Biguanide and GLP-1 RA and insulin (any)	1 (0.1)	0	1 (0.2)	0
Biguanide and SGLT2 inhibitor and insulin (any)	1 (0.1)	1 (0.4)	0	1 (0.4)
Biguanide and sulfonylurea and insulin (any)	10 (1.2)	8 (2.9)	2 (0.4)	7 (2.7)
Biguanide and DPP-4 inhibitor and SGLT2 inhibitor	2 (0.2)	1 (0.4)	1 (0.2)	1 (0.4)
Biguanide and sulfonylurea and SGLT2 inhibitor	3 (0.4)	1 (0.4)	2 (0.4)	0
Biguanide and sulfonylurea and GLP-1 RA	4 (0.5)	0	4 (0.8)	0
Biguanide and GLP-1 RA and SGLT2 inhibitor	7 (0.9)	1 (0.4)	6 (1.1)	1 (0.4)
Therapy with ≥ 4 GLAs,				
Any	115 (14.3)	47 (17.2)	68 (12.8)	47 (18.1)

Note: Data are *n* (%). Biguanide denotes metformin, the only drug of this class clinically available in China

ASCVD, atherosclerotic cardiovascular disease; CVD, cardiovascular disease; DPP-4, dipeptidyl peptidase-4; GLA, glucose-lowering agent; GLP-1 RA, glucagon-like peptide-1 receptor agonist; SGLT2, sodium-glucose co-transporter-2

ESM — Table 3. Use of CV medications in the CAPTURE study population stratified by CVD status in China in 2019

	Study population n = 805	By CVD status		
		CVD n = 273	Non-CVD n = 532	ASCVD n = 259
Any CV medication				
Yes	260 (32.3)	151 (55.3)	109 (20.5)	151 (58.3)
No	545 (67.7)	122 (44.7)	423 (79.5)	108 (41.7)
Medications for hypertension or other CVD				
Any	113 (14.0)	75 (27.5)	38 (7.1)	75 (29.0)
Angiotensin II receptor blocker	69 (8.6)	41 (15.0)	28 (5.3)	41 (15.8)
Calcium channel blocker	60 (7.5)	42 (15.4)	18 (3.4)	42 (16.2)
Angiotensin-converting enzyme inhibitor	8 (1.0)	7 (2.6)	1 (0.2)	7 (2.7)
Beta blocker	36 (4.5)	30 (11.0)	6 (1.1)	30 (11.6)
Lipid-lowering medication				
Any	184 (22.9)	100 (36.6)	84 (15.8)	100 (38.6)
Statin	170 (21.1)	98 (35.9)	72 (13.5)	98 (37.8)
Fibrate	19 (2.4)	4 (1.5)	15 (2.8)	4 (1.5)
Nicotinic acid or derivative	1 (0.1)	1 (0.4)	0	1 (0.4)
Platelet-aggregation inhibitor				
Any	128 (15.9)	94 (34.4)	34 (6.4)	94 (36.3)
Acetylsalicylic acid	101 (12.5)	68 (24.9)	33 (6.2)	68 (26.3)
Other ADP receptor inhibitor	20 (2.5)	19 (7.0)	1 (0.2)	19 (7.3)
Dual antiplatelet therapy	7 (0.9)	7 (2.6)	0	7 (2.7)
Anti-thrombotic medication				
Any	3 (0.4)	3 (1.1)	0	3 (1.2)
Vitamin K antagonist	2 (0.2)	2 (0.7)	0	2 (0.8)
Direct thrombin inhibitor	1 (0.1)	1 (0.4)	0	1 (0.4)
Diuretic				
Any	11 (1.4)	6 (2.2)	5 (0.9)	6 (2.3)
Thiazide	10 (1.2)	5 (1.8)	5 (0.9)	5 (1.9)
Aldosterone antagonist	2 (0.2)	1 (0.4)	1 (0.2)	1 (0.4)
Vasodilator				

Any	8 (1.0)	8 (2.9)	0	8 (3.1)
Organic nitrate	8 (1.0)	8 (2.9)	0	8 (3.1)
Other cardiac preparation	6 (0.7)	5 (1.8)	1 (0.2)	5 (1.9)
Peripheral vasodilator	3 (0.4)	1 (0.4)	2 (0.4)	1 (0.4)

Note: Data are *n* (%).

ADP, adenosine diphosphate; ASCVD, atherosclerotic cardiovascular disease; CV, cardiovascular; CVD, cardiovascular disease

ESM — Table 4. Use of CV medications in patients with T2D and CVD across 12 countries

(excluding China) and in China

	Multinational ^a population n = 3309	China CAPTURE population n = 273
Any CV medication		
Yes	3064 (92.6)	151 (55.3)
No	245 (7.4)	122 (44.7)
Medications for hypertension or other CVD		
Any	2716 (82.1)	75 (27.5)
Angiotensin II receptor blocker	1246 (37.7)	41 (15.0)
Calcium channel blocker	960 (29.0)	42 (15.4)
Angiotensin-converting enzyme inhibitor	937 (28.3)	7 (2.6)
Beta blocker	1417 (42.8)	30 (11.0)
Lipid-lowering medication		
Any	2284 (69.0)	100 (36.6)
Statin	2200 (66.5)	98 (35.9)
Fibrate	185 (5.6)	4 (1.5)
Nicotinic acid or derivative	2 (0.1)	1 (0.4)
Platelet-aggregation inhibitor		
Any	1951 (59.0)	94 (34.4)
Acetylsalicylic acid	1329 (40.2)	68 (24.9)
Other ADP receptor inhibitor	322 (9.7)	19 (7.0)
Dual antiplatelet therapy	355 (10.7)	7 (2.6)
Anti-thrombotic medication		
Any	381 (11.5)	3 (1.1)
Vitamin K antagonist	132 (4.0)	2 (0.7)
Direct thrombin inhibitor	34 (1.0)	1 (0.4)
Diuretic		
Any	1087 (32.8)	6 (2.2)
Thiazide	418 (12.6)	5 (1.8)
Aldosterone antagonist	246 (7.4)	1 (0.4)
Vasodilator		
Any	240 (7.3)	8 (2.9)
Organic nitrate	217 (6.6)	8 (2.9)
Other cardiac preparation	91 (2.8)	5 (1.8)
Peripheral vasodilator	15 (0.5)	1 (0.4)

Note: Data are n (%)

^aArgentina, Australia, Brazil, Czech Republic, France, Hungary, Israel, Italy, Japan, Mexico, Saudi Arabia and Turkey

ADP, adenosine diphosphate; CV, cardiovascular; CVD, cardiovascular disease; T2D, type 2 diabetes