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Table S1. Age- and sex-specific median values for PP and baPWV

Age	Men			Women		
(year)	N	PP(mmHg)	baPWV(cm/s)	N	PP(mmHg)	baPWV(cm/s)
20-24	221	48.00	1195.00	27	39.67	1061.00
25-29	725	46.33	1267.00	193	38.80	1070.00
30-34	933	46.00	1347.00	540	40.00	1126.50
35-39	1200	45.33	1374.00	585	40.00	1167.00
40-44	2012	44.00	1410.00	1252	40.00	1228.50
45-49	2358	45.00	1453.00	1535	40.00	1298.00
50-54	2219	47.00	1484.00	642	40.83	1386.50
55-59	841	49.33	1532.00	473	48.67	1450.00
60-64	672	50.00	1602.50	437	50.00	1604.00
65-69	397	53.33	1688.00	194	54.00	1713.50
70-74	384	56.00	1841.50	168	57.67	1897.00
75-79	256	60.00	1972.00	75	60.00	2000.00
80-84	170	68.17	2075.00	32	61.00	2085.00
85-89	58	60.33	2129.50	8	65.00	2159.00
≥90	12	71.00	2184.50	0	.	.

Table S2. Sensitivity analysis on the effects of different PP and baPWV combination on the new-onset diabetes events.

Groups	N	Events	Incidence density (persons per year)	Model 1 HR (95%CI)	Model 2 HR (95%CI)
Excluding participants who were taking antihypertensive or lipid-lowering drugs					
Normal PP and baPWV	4951	149	6.73	Ref.	Ref.
Normal PP and increased baPWV	3030	148	11.54	1.90(1.51-2.38)	1.47(1.16-1.86)
Increased PP and normal baPWV	3609	104	7.26	1.31(1.02-1.68)	1.07(0.82-1.39)
Increased PP and baPWV	4646	250	13.68	2.48(2.02-3.04)	1.61(1.28-2.02)
Excluding participants with ABI ≤ 0.9					
Normal PP and baPWV	5143	174	7.50	Ref.	Ref.
Normal PP and increased baPWV	3420	192	12.95	1.83(1.49-2.25)	1.45(1.17-1.80)
Increased PP and normal baPWV	3845	122	7.85	1.21(0.96-1.53)	1.05(0.83-1.33)
Increased PP and baPWV	5662	356	15.10	2.26(1.88-2.71)	1.56(1.27-1.92)

Model 1, adjusted for age; Model 2, adjusted for age, BMI, MAP, hs-CRP, smoking, drinking, exercise, hyperlipidemia, family history of diabetes, antihypertensive drugs.

Table S3. Risk of different PP and baPWV combination on the new-onset diabetes events in the male population

Groups	N	Events	Incidence density (persons per year)	Model 1 HR (95%CI)	Model 2 HR (95%CI)
Normal PP and baPWV	3644	130	8.42	Ref.	Ref.
Normal PP and increased	2437	144	14.98	1.87(1.48-2.37)	1.72(1.35-2.20)

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baPWV					
Increased PP and normal baPWV	2563	88	9.52	1.27(0.97-1.67)	1.20(0.91-1.59)
Increased PP and baPWV	3814	258	18.26	2.41(1.95-2.97)	2.12(1.67-2.69)

Model 1, adjusted for age; Model 2, adjusted for age, BMI, MAP, hs-CRP, smoking, drinking, exercise, hyperlipidemia, family history of diabetes, antihypertensive drugs.

Table S4. Risk of different PP and baPWV combination on the new-onset diabetes events in the female population

Groups	N	Events	Incidence density (persons per year)	Model 1 HR (95%CI)	Model 2 HR (95%CI)
Normal PP and baPWV	1651	48	5.69	Ref.	Ref.
Normal PP and increased baPWV	1069	57	10.17	1.92(1.30-2.82)	1.63(1.10-2.42)
Increased PP and normal baPWV	1419	40	5.81	1.20(0.79-1.84)	0.96(0.62-1.47)
Increased PP and baPWV	2022	112	10.99	2.08(1.48-2.93)	1.25(0.85-1.84)

Model 1, adjusted for age; Model 2, adjusted for age, BMI, MAP, hs-CRP, smoking, drinking, exercise, hyperlipidemia, family history of diabetes, antihypertensive drugs.

Table S5. Risk of different PP and baPWV combination on the new-onset diabetes events in the age≥60 population

Groups	N	Events	Incidence density (persons per year)	Model 1 HR (95%CI)	Model 2 HR (95%CI)
Normal PP and baPWV	822	45	11.07	Ref.	Ref.
Normal PP and increased baPWV	497	33	13.19	1.18(0.75-1.85)	1.07(0.67-1.72)
Increased PP and normal baPWV	606	40	14.28	1.32(0.86-2.02)	1.16(0.73-1.83)
Increased PP and baPWV	938	73	16.20	1.47(1.01-2.13)	1.42(0.93-2.17)

Model 1, adjusted for age and gender; Model 2, adjusted for age, gender, BMI, MAP, hs-CRP, smoking, drinking, exercise, hyperlipidemia, family history of diabetes, antihypertensive drugs.

Table S6. Risk of different PP and baPWV combination on the new-onset diabetes events in the age＜60 population

Groups	N	Events	Incidence density (persons per year)	Model 1 HR (95%CI)	Model 2 HR (95%CI)
Normal PP and baPWV	4473	133	6.72	Ref.	Ref.
Normal PP and increased baPWV	3009	168	13.22	2.14(1.70-2.69)	1.88(1.48-2.37)
Increased PP and normal baPWV	3376	88	6.60	1.20(0.91-1.57)	1.07(0.81-1.41)
Increased PP and baPWV	4898	297	14.99	2.59(2.11-3.18)	1.92(1.53-2.42)

Model 1, adjusted for age and gender; Model 2, adjusted for age, gender, BMI, MAP, hs-CRP, smoking, drinking, exercise, hyperlipidemia, family history of diabetes, antihypertensive drugs.

There are 1444 participants with prediabetes at baseline. To assess the potential confounding effects of prediabetes, we performed a sensitivity analysis excluding prediabetic patients.

Table S7. Risk of different PP and baPWV combination on the new-onset diabetes events

Groups	N	Events	Incidence density (persons per year)	Model 1 HR (95%CI)	Model 2 HR (95%CI)
Normal PP and baPWV	5020	133	5.88	Ref.	Ref.
Normal PP and increased baPWV	3253	142	10.01	1.83(1.45-2.33)	1.63(1.28-2.08)
Increased PP and normal baPWV	3682	80	5.35	1.07(0.81-1.42)	0.97(0.73-1.29)
Increased PP and baPWV	5220	242	11.05	2.12(1.71-2.62)	1.63(1.28-2.07)

Model 1, adjusted for age and gender; Model 2, adjusted for age, gender, BMI, MAP, hs-CRP, smoking, drinking, exercise, hyperlipidemia, family history of diabetes, antihypertensive drugs.

There were 103 pregnancies during the follow-up period, and 27 were diagnosed with gestational diabetes. To assess the potential confounding effects of gestational diabetes, we performed a sensitivity analysis excluding gestational diabetes.

Table S8. Risk of different PP and baPWV combination on the new-onset diabetes events

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Groups	N	Events	Incidence density (persons per year)	Model 1 HR (95%CI)	Model 2 HR (95%CI)
Normal PP and baPWV	5289	178	7.47	Ref.	Ref.
Normal PP and increased baPWV	3501	201	13.23	1.88(1.53-2.30)	1.66(1.35-2.05)
Increased PP and normal baPWV	3976	128	7.95	1.23(0.98-1.54)	1.09(0.86-1.37)
Increased PP and baPWV	5826	370	15.24	2.29(1.91-2.73)	1.74(1.43-2.13)

Model 1, adjusted for age and gender; Model 2, adjusted for age, gender, BMI, MAP, hs-CRP, smoking, drinking, exercise, hyperlipidemia, family history of diabetes, antihypertensive drugs.