SUPPLEMENTAL MATERIAL

Data S1. Methods of Blood Pressure Measurement

1. The auscultation method should use an accurately calibrated mercury or aneroid sphygmomanometer. A calibrated electronic sphygmomanometer can also be used.

2. Healthcare professionals should choose the correct cuff size and wrap the cuff around the arm, with the center of the cuff bladder over the brachial artery. The stethoscope, standard sphygmomanometers, and cuff and bulb should be checked regularly to ensure that BP measurements have a standardized high level of accuracy and precision. The appropriate BP cuff size should be determined by measuring the participant's arm circumference at the mid-point between the acromion and olecranon. A cuff with a bladder 13 cm wide and 22–24 cm long should be used for the auscultation method. A pediatric cuff should be used for a brachial girth less than 27 cm, and a large adult cuff for an arm girth ≥34 cm.

3. Caffeine, eating, heavy physical activity, smoking, and talking should be avoided before measurement.

4. Research staff should measure right-arm brachial artery blood pressure two times after the participant had been sitting in a quiet room for 5 minutes in a seated position on a chair with back support and the participant's legs uncrossed. The inner aspect of the bend at the elbow (cubital fossa) should be maintained at heart level.

5. Measurement: The cuff should rapidly be inflated while palpating the radial or brachial artery, and the stethoscope should be applied once the pressure in the blood pressure cuff has risen to 20-30 mmHg or more above the level at which the radial (or brachial) arterial pulse is no longer palpable. Then, the cuff should be slowly deflated (2 mmHg per second). Staff should record the 1st and 5th Korotkoff sounds, rounding the pressure in mmHg to the nearest even number and recording it.

6. The measurements should be performed two times at an interval of ≥ 1 min, and the mean value of two measurements that provide stable values (difference in the values: <5 mmHg) should be used for the analyses.

Table S1. Alternative Blood Pressure Categorization and Atrial Fibrillation Stratified by Sex

	Men				Women				P for interaction
	Normal/Elevated BP	Isolated Diastolic Hypertension	Isolated Systolic Hypertension	Systolic Diastolic Hypertension	Normal/Elevated BP	Isolated Diastolic Hypertension	Isolated Systolic Hypertension	Systolic Diastolic Hypertension	
No. of Individuals	1,187,598	278,915	94,058	383,137	1,138,541	107,489	52,192	141,808	-------
No. of Events	4,816	1,868	620	3,297	1,716	266	178	502	-------
Incidence (10000 person-years)	11.9 (11.6-12.3)	18.5 (17.7-19.3)	19.5 (18.0-21.1)	24.5 (23.7-25.3)	4.9 (4.7-5.2)	8.3 (7.4-9.4)	11.1 (9.6-12.9)	12.0 (11.0-13.0)	-------
Model 1	1 [Reference]	1.54 (1.46-1.63)	1.62 (1.49-1.77)	2.04 (1.95-2.13)	1 [Reference]	1.69 (1.48-1.92)	2.24 (1.92-2.62)	2.42 (2.19-2.68)	0.0002
Model 2	1 [Reference]	1.24 (1.17-1.30)	1.36 (1.25-1.48)	1.41 (1.35-1.48)	1 [Reference]	1.39 (1.22-1.58)	1.38 (1.18-1.62)	1.60 (1.45-1.77)	0.0894
Model 3	1 [Reference]	1.19 (1.12-1.25)	1.31 (1.20-1.42)	1.31 (1.25-1.38)	1 [Reference]	1.38 (1.21-1.57)	1.37 (1.17-1.60)	1.57 (1.42-1.75)	0.0097

Model 1=Unadjusted Model. Model 2=Adjusted for age. Model 3=Adjusted for age, body mass index, diabetes mellitus, dyslipidemia, cigarette smoking, and alcohol consumption.

Table S2. Subgroup Analysis of Alternative Blood Pressure Categorization and Atrial Fibrillation Stratified by Sex

Age ≥ 50 years

	Men				Women				
	Normal/Elevated BP	Isolated Diastolic Hypertension	Isolated Systolic Hypertension	Systolic Diastolic Hypertension	Normal/Elevated BP	Isolated Diastolic Hypertension	Isolated Systolic Hypertension	Systolic Diastolic Hypertension	P for interaction
No. of Individuals	263,019	100,875	28,015	173,059	276,587	40,512	30,943	79,496	-------
No. of Events	2,559	1,107	411	2,198	796	144	130	345	-------
Incidence (10000 person-years)	27.8 (26.7-28.9)	31.4 (29.6-33.3)	44.7 (40.5-49.2)	38.2 (36.7-39.9)	9.8 (9.2-10.6)	12.4 (10.6-14.6)	15.3 (12.8-18.1)	15.8 (14.2-17.6)	-------
Model 1	1 [Reference]	1.13 (1.05-1.21)	1.61 (1.45-1.78)	1.38 (1.30-1.46)	1 [Reference]	1.27 (1.06-1.51)	1.55 (1.29-1.87)	1.61 (1.42-1.83)	0.1023
Model 2	1 [Reference]	1.16 (1.09-1.25)	1.36 (1.23-1.51)	1.31 (1.24-1.39)	1 [Reference]	1.27 (1.06-1.52)	1.24 (1.03-1.50)	1.46 (1.29-1.66)	0.2354
Model 3	1 [Reference]	1.13 (1.05-1.21)	1.32 (1.18-1.46)	1.24 (1.17-1.31)	1 [Reference]	1.25 (1.05-1.49)	1.22 (1.01-1.47)	1.41 (1.24-1.61)	0.1615

Age < 50 years

	Men				Women				
	Normal/Elevated BP	Isolated Diastolic Hypertension	Isolated Systolic Hypertension	Systolic Diastolic Hypertension	Normal/Elevated BP	Isolated Diastolic Hypertension	Isolated Systolic Hypertension	Systolic Diastolic Hypertension	P for interaction
No. of Individuals	924,579	178,040	66,043	210,078	861,954	66,977	21,249	62,312	-------
No. of Events	2,257	761	209	1,099	920	122	48	157	-------
Incidence (10000 person-years)	7.2 (7.0-7.6)	11.6 (10.8-12.4)	9.3 (8.1-10.6)	14.2 (13.4-15.1)	3.5 (3.2-3.7)	6.0 (5.0-7.2)	6.4 (4.8-8.5)	7.8 (6.7-9.1)	-------
Model 1	1 [Reference]	1.57 (1.45-1.70)	1.25 (1.08-1.44)	1.91 (1.78-2.06)	1 [Reference]	1.74 (1.44-2.10)	1.81 (1.35-2.42)	2.24 (1.89-2.65)	0.0581
Model 2	1 [Reference]	1.31 (1.20-1.42)	1.36 (1.18-1.57)	1.58 (1.47-1.70)	1 [Reference]	1.57 (1.30-1.90)	1.60 (1.20-2.14)	1.89 (1.59-2.24)	0.1053

| Model 3 | 1 [Reference] | 1.24 (1.14-1.35) | 1.29 (1.12-1.48) | 1.43 (1.32-1.54) | 1 [Reference] | 1.58 (1.31-1.92) | 1.62 (1.21-2.17) | 1.91 (1.59-2.28) | 0.0068 |

Model 1=Unadjusted Model. Model 2=Adjusted for age. Model 3=Adjusted for age, body mass index, diabetes mellitus, dyslipidemia, cigarette smoking, and alcohol consumption.

Table S3. Blood Pressure Category and Atrial Fibrillation Stratified by Sex including individuals with taking antihypertensive medications

	Men				Women				P for interaction
	Normal Blood Pressure	Elevated Blood Pressure	Stage 1 Hypertension	Stage 2 Hypertension	Normal Blood Pressure	Elevated Blood Pressure	Stage 1 Hypertension	Stage 2 Hypertension	
No. of Individuals	886,696	362,403	570,015	335,554	992,612	180,759	228,589	129,025	-------
No. of Events	3,857	1,903	4,424	3,891	1,464	464	711	590	-------
Incidence (10000 person-years)	12.8 (12.4-13.2)	15.7 (15.0-16.4)	21.7 (21.1-22.4)	34.3 (33.3-35.4)	4.9 (4.6-5.1)	8.4 (7.7-9.2)	10.3 (9.5-11.0)	16.2 (14.9-17.5)	-------
Model 1	1 [Reference]	1.23 (1.16-1.30)	1.70 (1.62-1.77)	2.69 (2.57-2.81)	1 [Reference]	1.73 (1.55-1.92)	2.11 (1.93-2.31)	3.35 (3.04-3.69)	<0.001
Model 2	1 [Reference]	1.15 (1.09-1.22)	1.28 (1.23-1.34)	1.68 (1.61-1.76)	1 [Reference]	1.27 (1.14-1.41)	1.41 (1.29-1.55)	1.85 (1.68-2.05)	0.1525
Model 3	1 [Reference]	1.11 (1.05-1.17)	1.20 (1.15-1.26)	1.52 (1.45-1.60)	1 [Reference]	1.24 (1.12-1.38)	1.38 (1.25-1.51)	1.78 (1.60-1.93)	0.0175
Model 4	1 [Reference]	1.09 (1.03-1.15)	1.16 (1.11-1.22)	1.45 (1.39-1.52)	1 [Reference]	1.22 (1.10-1.36)	1.31 (1.19-1.44)	1.64 (1.47-1.82)	0.0694

Model 1=Unadjusted Model. Model 2=Adjusted for age. Model 3=Adjusted for age, body mass index, diabetes mellitus, dyslipidemia, cigarette smoking, and alcohol consumption. Model 4=Adjusted for age, body mass index, diabetes mellitus, dyslipidemia, cigarette smoking, alcohol consumption, and the presence of antihypertensive medications.

Table S4. Blood Pressure Category and Atrial Fibrillation Stratified by Sex after Multiple Imputations

	Men				Women				P for interaction
	Normal Blood Pressure	Elevated Blood Pressure	Stage 1 Hypertension	Stage 2 Hypertension	Normal Blood Pressure	Elevated Blood Pressure	Stage 1 Hypertension	Stage 2 Hypertension	
No. of Individuals	1,023,634	411,638	585,119	311,154	1,115,074	192,088	227,479	115,207	-------
No. of Events	3,939	1,800	3,808	3,179	1,565	439	597	476	-------
Incidence (10000 person-years)	10.7 (10.4-11.1)	12.3 (11.7-12.9)	17.2 (16.7-17.8)	28.7 (27.8-29.8)	4.5 (4.3-4.7)	7.2 (6.6-7.9)	8.4 (7.7-9.1)	14.2 (13.0-15.6)	-------
Model 1	1 [Reference]	1.14 (1.08-1.20)	1.59 (1.52-1.66)	2.67 (2.55-2.80)	1 [Reference]	1.60 (1.44-1.78)	1.86 (1.69-2.04)	3.18 (2.87-3.52)	<0.001
Model 2	1 [Reference]	1.14 (1.07-1.20)	1.25 (1.19-1.31)	1.71 (1.63-1.80)	1 [Reference]	1.24 (1.11-1.38)	1.32 (1.20-1.46)	1.89 (1.70-2.11)	0.1433
Model 3	1 [Reference]	1.10 (1.04-1.17)	1.19 (1.13-1.24)	1.58 (1.50-1.66)	1 [Reference]	1.24 (1.11-1.38)	1.31 (1.19-1.45)	1.87 (1.68-2.09)	0.0259

Model 1=Unadjusted Model. Model 2=Adjusted for age. Model 3=Adjusted for age, body mass index, diabetes mellitus, dyslipidemia, cigarette smoking, and alcohol consumption.

Table S5. Blood Pressure Category and Atrial Fibrillation Stratified by Sex using the cause-specific Cox proportional hazard modeling

	Men				Women				P for interaction
	Normal Blood Pressure	Elevated Blood Pressure	Stage 1 Hypertension	Stage 2 Hypertension	Normal Blood Pressure	Elevated Blood Pressure	Stage 1 Hypertension	Stage 2 Hypertension	
No. of Individuals	851,494	336,104	491,293	264,817	971,120	167,421	199,296	102,193	-------
No. of Events	3,326	1,490	3,160	2,625	1,345	371	532	414	-------
Incidence (10000 person-years)	11.4 (11.1-11.8)	13.2 (12.6-13.9)	17.8 (17.2-18.4)	29.1 (28.0-30.3)	4.6 (4.3-4.8)	7.2 (6.5-8.0)	8.7 (8.0-9.5)	14.3 (13.0-15.7)	-------
Model 1	1 [Reference]	1.15 (1.08-1.23)	1.54 (1.47-1.62)	2.54 (2.41-2.67)	1 [Reference]	1.57 (1.40-1.77)	1.91 (1.73-2.12)	3.16 (2.83-3.53)	<0.001
Model 2	1 [Reference]	1.13 (1.06-1.20)	1.23 (1.17-1.29)	1.68 (1.59-1.76)	1 [Reference]	1.22 (1.08-1.37)	1.38 (1.24-1.52)	1.91 (1.70-2.14)	0.1066
Model 3	1 [Reference]	1.10 (1.03-1.17)	1.17 (1.11-1.23)	1.55 (1.47-1.63)	1 [Reference]	1.22 (1.08-1.37)	1.37 (1.23-1.52)	1.89 (1.68-2.12)	0.0076

Model 1=Unadjusted Model. Model 2=Adjusted for age. Model 3=Adjusted for age, body mass index, diabetes mellitus, dyslipidemia, cigarette smoking, and alcohol consumption.

Table S6. Blood Pressure Category and Atrial Fibrillation Stratified by Sex after additional adjustment for use of sex hormones and modulators of the genital system medications

	Men				Women				P for interaction
	Normal Blood Pressure	Elevated Blood Pressure	Stage 1 Hypertension	Stage 2 Hypertension	Normal Blood Pressure	Elevated Blood Pressure	Stage 1 Hypertension	Stage 2 Hypertension	
No. of Individuals	851,494	336,104	491,293	264,817	971,120	167,421	199,296	102,193	-------
No. of Events	3,326	1,490	3,160	2,625	1,345	371	532	414	-------
Incidence (10000 person-years)	11.4 (11.1-11.8)	13.2 (12.6-13.9)	17.8 (17.2-18.4)	29.1 (28.0-30.3)	4.6 (4.3-4.8)	7.2 (6.5-8.0)	8.7 (8.0-9.5)	14.3 (13.0-15.7)	-------
Model 1	1 [Reference]	1.15 (1.08-1.23)	1.54 (1.47-1.62)	2.54 (2.41-2.67)	1 [Reference]	1.57 (1.40-1.77)	1.91 (1.73-2.12)	3.16 (2.83-3.53)	<0.001
Model 2	1 [Reference]	1.13 (1.06-1.20)	1.23 (1.17-1.29)	1.68 (1.59-1.76)	1 [Reference]	1.22 (1.09-1.37)	1.38 (1.24-1.52)	1.91 (1.70-2.14)	0.1525
Model 3	1 [Reference]	1.10 (1.03-1.17)	1.17 (1.11-1.23)	1.55 (1.47-1.63)	1 [Reference]	1.22 (1.08-1.37)	1.37 (1.23-1.52)	1.89 (1.68-2.13)	0.0073

The association between blood pressure category and atrial fibrillation stratified by sex is summarized. The incidence is presented in in 10000 person-years. Model 1=Unadjusted Model. Model 2=Adjusted for age. Model 3=Adjusted for age, body mass index, diabetes mellitus, dyslipidemia, cigarette smoking, alcohol consumption, and use of sex hormones and modulators of the genital system medications.