Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Characteristics of the Cohorts Included in the NHLBI Pooled Cohorts Study

Cohort	Sites	Enrollment year	Major eligibility criteria	Self-reported fixed categories for race or race/ethnicity	Censoring year for events / Median follow-up in years (Q1, Q3)
Atherosclerosis Risk in Communities Study (ARIC)	Forsyth County, NC Jackson, MS Minneapolis, MN Washington County, MD	1987-89	Age 45 -64 years	American Indian Black East Asian/Pacific Islanders White	2018 26.5 (18.5, 28.1)
Coronary Artery Risk Development in Young Adults Study (CARDIA)	Chicago, IL Oakland, CA Birmingham, AL Minneapolis, MN	1985-1986	Age 18 – 30 years	Black White	2018 29.3 (28.2, 30.0)
Cardiovascular Health Study (CHS)	Pittsburgh, PA Winston-Salem, NC Sacramento, CA Hagerstown, MD	1989-90 1992-93 (African American cohort)	Age 65 + years	American Indian Black East Asian/Pacific Islanders White Others	2018 13.2 (7.8, 18.1)
Framingham Offspring Cohort (FOC)	Framingham, MA	1971–1975	Offspring of the Framingham heart Study-Original Cohort and their spouses	The FOC study was conducted in offspring of the original Framingham Heart Study cohort, which was exclusively non-Hispanic White race. No question separate question regarding race/ethnicity was administered at enrollment.	2018 21.8 (17.0, 26.2)
Health, Aging, and Body Composition (Health ABC) Study	Pittsburgh, PA Memphis, TN San Francisco, CA	1997-98	Age 70 – 79 years	Black East Asian/Pacific Islanders Hispanic/Latino White	2014 12.5 (7.8, 16.4)

Cohort	Sites	Enrollment year	Major eligibility criteria	Self-reported fixed categories for race or race/ethnicity	Censoring year for events / Median follow-up in years (Q1, Q3)
Hispanic Community Health Study/ Study of Latinos (HCHS/SOL)	San Diego, CA Chicago, IL Bronx, NY Miami, FL	2008-11	Age 18 – 74 years	Two separate questions were administered at the enrollment describing Hispanic/Latino heritage and race: **1. Hispanic/Latino heritage:** i) Dominican/ Dominican descent ii) Central American/ Central American descent iii) Cuban/ Cuban descent iv) Mexican/ Mexican descent v) Puerto Rican/ Puerto Rican descent vi) South American/ South American descent vii) More than one heritage viii) Other **2) Race:** i) White ii) Black or African American iii) Asian iv) American Indian/Alaskan Native v) Native Hawaiian/ Pacific Islander vi) More than one race For the purposes of this paper, all participants were considered to be of Hispanic/Latino race/ethnicity.	Data not available

Cohort	Sites	Enrollment year	Major eligibility criteria	Self-reported fixed categories for race or race/ethnicity	Censoring year for events / Median follow-up in years (Q1, Q3)
Jackson Heart Study (JHS)	Jackson, MS	2000-04	Age 20 – 95 years	The JHS was conducted exclusively in Black participants. No question separate question regarding race/ethnicity was administered at enrollment.	2016 13.8 (13.1, 14.5)
Multi-Ethnic Study of Atherosclerosis (MESA)	Winston-Salem, NC Upper Manhattan/Bronx, NY Los Angeles, CA Baltimore, MD Chicago, IL Minneapolis, MN	2000-02	Age 45-84 years Participants required to be free of clinical cardiovascular disease.	Black East Asian (Chinese)/Pacific Islanders Hispanic/Latino White	2018 11.2 (6.9, 12.1)
Strong Heart Study (SHS)	Phoenix, AZ Southwestern OK Western and central ND and SD	1989-91	Age 45 – 74 years	The SHS was conducted exclusively in participants of American Indian origin. No question separate question regarding race/ethnicity was administered at enrollment.	2016 19.2 (10.5, 22.1)

eTable 2. Classification of Coronary Heart Disease (CHD) and Respiratory Mortality and Events

Events	Definitions
CHD hospitalizations/ mortality	• Coronary heart disease (CHD) events data were available in all cohorts except HCHS/SOL. • In all cohorts, all potential clinical CHD events were reviewed and adjudicated by the physicians in the endpoints review committee. • Participants were diagnosed as having developed CHD if upon review of the case the review committee agrees on one of the following definite manifestations of CHD: myocardial infarction, coronary insufficiency, angina pectoris, sudden death from CHD, non-sudden death from CHD. • For hospitalized events, a diagnosis of definite, probable, or silent myocardial infarction (MI) was made by trained abstractors or physician reviewers based on presenting symptoms, cardiac enzymes tests, and electrocardiograms (ECGs). • Out-of-hospital deaths, including deaths in emergency room, were investigated by death certificates and by interview with next-of-kin, and questionnaire completed by the patient's physicians. • Incident cases had at least one of the following newly developed manifestations: Fatal MI defined as definite MI within previous 4 weeks of death and no known non-atherosclerotic or non-cardiac atherosclerotic process or event that was likely to have been lethal. • Fatal coronary heart disease defined based on combinations of: (1) no known non-atherosclerotic or non-cardiac atherosclerotic process or event that was likely to have been lethal, (2) presence of chest pain, (3) history of CHD (MI or angina), and/or (4) ICD-9 codes410-414, 427.5, 429.2 and/or 799 from death certificate; definite and probable MI identified by chest pain, ECG and/or enzymes; silent MI identified by ECG.
Respiratory-related events	• Respiratory–related events were defined as hospitalizations or deaths for which chronic lower respiratory disease was classified as a primary, underlying, or contributing cause. • Respiratory-related events data were available in 4 cohorts- ARIC, CHS, HABC, and MESA. • In three cohorts (ARIC, CHS, and MESA), events were classified using International Classification of Diseases, Ninth Revision (ICD-9) and International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10) diagnosis codes for COPD [ICD-9: 496; ICD-10: J44], chronic bronchitis [ICD-9: 490-1; ICD-10; J40-2], and emphysema [ICD-9: 492; ICD-10: J43]. • In HABC, events were prospectively ascertained and adjudicated for COPD hospitalizations.
Respiratory mortality	• Respiratory mortality data were available in 6 cohorts- ARIC, CHS, CARDIA, HABC, MESA, and SHS. • Respiratory disease–related deaths were defined by adjudication or administrative criteria (ICD-10: J1-J99).

eTable 3. Comparison Between Nonimputed and Imputed Datasets for All-Cause Mortality Analyses

	Non-imputed	Imputed
N	53,701	53,701
Age, mean (SD)	53.2 (15.8)	53.2 (15.8)
Missing	0	
Sex, N (%)		
Female	30,288 (56.4)	30,288 (56.4)
Male	23,413 (43.6)	23,413 (43.6)
Missing	0	
Race, N (%)		
American Indian	1,779 (3.3)	1,779 (3.3)
Black / African American	11,672 (21.7)	11,672 (21.7)
East Asian / Pacific Islander	659 (1.2)	659 (1.2)
Hispanic / Latino	14,597 (27.2)	14,597 (27.2)
Non-Hispanic White	24,979 (46.5)	24,979 (46.5)
Other[a]	15 (0.03)	15 (0.03)
Missing	0	
Education, N (%)		
Less than high school	7,806 (14.5)	7,856 (14.6)
High school	14,499 (27.0)	14,739 (27.5)
Some college	8,366 (15.6)	8,543 (15.9)
College or more	22,311 (41.6)	22,563 (42.0)
Missing	719 (1.3)	
Smoking Status, N (%)		
Never	25,956 (48.3)	26,048 (48.5)
Former	16,602 (30.9)	16,664 (31.0)
Current	10,953 (20.4)	10,989 (20.5)
Missing	190 (0.4)	
Pack-years among ever smokers, median (Q1, Q3)	15.6 (4.5, 34.0)	15.4 (4.5, 34.0)
Missing	943	
Body Mass Index, mean (SD)	28.1 (5.8)	28.1 (5.8)
Missing	105	
Co-morbidities, N (%)		
Hypertension[b]		
Yes	22,516 (41.9)	22,528 (42.0)
No	31,167 (58.0)	31,173 (58.0)
Missing	18 (0.03)	

	Non-imputed	Imputed
Diabetes[c]		
Yes	7,729 (14.4)	7,736 (14.4)
No	45,944 (85.6)	45,965 (85.6)
Missing	28 (0.1)	
Coronary heart disease[d]		
Yes	2,849 (5.3)	2,886 (5.4)
No	50,621 (94.3)	50,815 (94.6)
Missing	231 (0.4)	
Heart failure[d]		
Yes	3,107 (5.8)	3,133 (5.8)
No	50,425 (93.9)	50,568 (94.2)
Missing	169 (0.3)	
Stroke[d]		
Yes	859 (1.6)	945 (1.8)
No	49,970 (93.1)	52,756 (98.2)
Missing	2,872 (5.4)	
Asthma[e]		
Yes	4,521 (8.4)	4,567 (8.5)
No	48,838 (90.9)	49,134 (91.5)
Missing	342 (0.6)	
Chronic lower respiratory disease[f]		
Yes	6,042 (11.3)	6,059 (11.3)
No	47,474 (88.4)	47,642 (88.7)
Missing	185 (0.3)	
eGFR[g], mean (SD)	83.3 (239.2)	82.7 (213.2)
Missing	11,179	
eGFR[g] categories, N (%)		
60 + mL/min/1.73m^2	35,465 (66.0)	44,669 (83.2)
30-59 mL/min/1.73m^2	6,773 (12.6)	8,686 (16.2)
<30 mL/min/1.73m^2	284 (0.5)	346 (0.6)
Missing	11,179 (20.8)	

[a] “Other” race category includes self-identified "other" or self-identified mixed race individuals
[b] Self-reported hypertension or systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg or use of anti-hypertensive medications
[c] Self-reported diabetes or fasting blood sugar level ≥ 126 mg/dl or use of oral hypoglycemic agents or insulin
[d] Data on comorbidities at baseline, including coronary heart disease, congestive heart failure (HF), and stroke were self-reported. If missing, data was obtained from hospitalization records prior to baseline spirometry. In JHS, neither self-reported information on HF nor hospitalization records prior to baseline spirometry were available. Therefore, baseline HF was defined as HF events occurring within 5 years of baseline spirometry.
[e] Self-reported physician diagnosed asthma
[f] Self-reported physician diagnosed chronic obstructive pulmonary disease, chronic bronchitis, or emphysema
[g] For baseline eGFR, measurements obtained at baseline spirometry visit were used. If missing, first available eGFR measurements were used.

eTable 4. Age and Smoking-Adjusted Absolute Incidence Rates for Respiratory Mortality, Stratified by Cohort

	Number of events / at risk (Cum. Inc.)	Median follow-up in years (Q1, Q3)	IDR/1,000 person-years (95% CI)[a]			Difference in IDR /1,000 person-years (95% CI) p-value	
			PRISm	Obstructive Spirometry	Normal Spirometry	PRISm vs Normal Spirometry	PRISm vs Obstructive Spirometry
ARIC	14,843 / 6,928 (46.7)	26.5 (18.5, 28.1)	30.4 (27.8, 32.9)	25.2 (24.0, 26.4)	17.8 (17.2, 18.3)	12.6 (10.0, 15.2) <.001	5.2 (2.4, 8.0) <.001
CARDIA	4,994 / 373 (7.5)	29.3 (28.2, 30.0)	7.0 (4.6, 9.4)	3.4 (1.9, 4.9)	2.4 (2.2, 2.7)	4.5 (2.1, 7) <.001	3.6 (0.8, 6.4) 0.012
CHS	4,812 / 3.786 (78.7)	13.2 (7.8, 18.1)	72.9 (64.8, 81)	69.2 (65.8, 72.5)	51 (48.5, 53.4)	21.9 (13.5, 30.4) <.001	3.7 (-5, 12.5) 0.41
FOC	3,894 / 1,131 (29.0)	21.8 (17.0, 26.2)	23.6 (19.1, 28.1)	14.7 (13, 16.3)	12.7 (11.7, 13.7)	10.9 (6.3, 15.5) <.001	9 (4.2, 13.8) <.001
HABC	2,578 / 1,575 (61.1)	12.5 (7.8, 16.4)	79.5 (66.9, 92.2)	65.2 (59, 71.5)	45 (42.1, 47.9)	34.6 (21.6, 47.5) <.001	14.3 (0.2, 28.4) 0.046
JHS	2,498 / 261 (10.4)	13.8 (13.1, 14.5)	14 (9, 19.1)	13.4 (7.2, 19.5)	6.7 (5.7, 7.7)	7.4 (2.2, 12.6) 0.005	0.7 (-7.3, 8.7) 0.87
MESA	4,463 / 632 (14.2)	11.2 (6.9, 12.1)	22.8 (17.2, 28.4)	18.1 (15.6, 20.5)	12.8 (11.3, 14.2)	10 (4.2, 15.8) <.001	4.7 (-1.4, 10.8) 0.13
SHS	1,754 / 975 (55.6)	19.2 (10.5, 22.1)	55.7 (35.5, 75.8)	39.2 (33.2, 45.2)	31.6 (29.1, 34)	24.1 (3.8, 44.4) 0.02	16.5 (-4.6, 37.5) 0.13

Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

[a] Using the direct method and the observed age distribution across all 9 cohorts, age- and smoking-adjusted absolute incidence density rates, and their differences were calculated per 1,000 person-years for each lung function category.

eTable 5. Age and Smoking-Adjusted Absolute Incidence Rates for Respiratory Mortality, Stratified by Cohort

	Number of events / at risk (Cum. Inc.)	Median follow-up in years (Q1, Q3)	IDR/1,000 person-years (95% CI)[a]			Difference in IDR /1,000 person-years (95% CI) p-value	
			PRISm	Obstructive Spirometry	Normal Spirometry	PRISm vs Normal spirometry	PRISm vs Obstructive spirometry
ARIC	472 / 13,398 (3.5)	25.8 (17.7, 28.0)	1.6 (1.0, 2.2)	3.3 (2.9, 3.7)	0.7 (0.6, 0.8)	0.9 (0.3, 1.6) 0.003	-1.7 (-2.4, -1) <.001
CARDIA[b]	14 / 4,994 (0.3)	29.3 (28.2, 30.0)	-	0.5 (-0.2, 1.1)	0.1 (0, 0.1)	-	-
CHS	402 / 4,812 (8.4)	13.2 (7.8, 18.1)	7.1 (4.6, 9.7)	9.3 (8.1, 10.5)	3.7 (3.1, 4.4)	3.4 (0.7, 6.1) 0.012	-2.2 (-5.0, 0.6) 0.13
HABC	94 / 2,578 (3.7)	12.5 (7.8, 16.4)	5.6 (2.1, 9.1)	6.7 (4.9, 8.6)	1.3 (0.9, 1.8)	4.3 (0.7, 7.8) 0.019	-1.1 (-5.1, 2.8) 0.58
MESA	28 / 4,462 (0.6)	11.2 (6.9, 12.1)	1.6 (0.0, 3.2)	1.1 (0.5, 1.6)	0.3 (0.1, 0.6)	1.2 (-0.4, 2.9) 0.13	0.5 (-1.2, 2.2) 0.55
SHS	90 / 1,754 (5.1)	19.2 (10.5, 22.1)	2.7 (0.8, 4.6)	4.5 (2.7, 6.3)	2.7 (2, 3.5)	0.0 (-2.1, 2.0) 0.97	-1.8 (-4.4, 0.8) 0.17

Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

[a] Using the direct method and the observed age distribution across all 9 cohorts, age- and smoking-adjusted absolute incidence density rates, and their differences were calculated per 1,000 person-years for each lung function category.

[b] No respiratory deaths reported in individuals with PRISm.

eTable 6. Age and Smoking-Adjusted Absolute Incidence Rates for Coronary Heart Disease (CHD) Mortality, Stratified by Cohort

	Number of events / at risk (Cum. Inc.)	Median follow-up in years (Q1, Q3)	IDR/1,000 person-years (95% CI)[a]			Difference in IDR /1,000 person-years (95% CI) p-value	
			PRISm	Obstructive Spirometry	Normal Spirometry	PRISm vs Normal Spirometry	PRISm vs Obstructive Spirometry
ARIC	623 / 14,843 (4.2)	26.5 (18.5, 28.1)	4.1 (3.2, 5.1)	2.0 (1.7, 2.3)	1.6 (1.4, 1.7)	2.6 (1.6, 3.5) <.001	2.2 (1.2, 3.1) <.001
CARDIA	16 / 4,994 (0.3)	29.3 (28.2, 30.0)	0.7 (-0.1, 1.4)	0.5 (-0.1, 1.1)	0.1 (0.0, 0.1)	0.6 (-0.2, 1.4) 0.13	0.1 (-0.8, 1.1) 0.77
CHS	942 / 4,812 (19.6)	13.2 (7.8, 18.1)	17.5 (13.6, 21.4)	17.6 (15.9, 19.3)	12.6 (11.4, 13.8)	4.9 (0.8, 9.0) 0.02	-0.1 (-4.4, 4.2) 0.95
FOC	108 / 3,894 (2.8)	21.8 (17.0, 26.2)	3.5 (1.9, 5.2)	1.0 (0.6, 1.5)	1.3 (1.0, 1.6)	2.3 (0.6, 4.0) 0.01	2.5 (0.8, 4.2) 0.004
HABC	346 / 2,578 (13.4)	12.5 (7.8, 16.4)	17.8 (11.9, 23.8)	12.6 (9.9, 15.3)	10.4 (9.0, 11.7)	7.5 (1.4, 13.6) 0.02	5.2 (-1.3, 11.7) 0.12
JHS[b]	9 / 2,291 (0.4)	13.8 (13.1, 14.5)	0.8 (0.0, 1.6)	-	0.3 (0.0, 0.5)	0.5 (-0.3, 1.4) 0.21	-
MESA	68 / 4,462 (1.5)	11.2 (6.9, 12.1)	2.7 (0.8, 4.7)	1.5 (0.8, 2.1)	1.5 (1.0, 2.0)	1.2 (-0.8, 3.2) 0.24	1.2 (-0.8, 3.3) 0.24
SHS	240 / 17,54 (13.7)	19.2 (10.5, 22.1)	12.5 (8.6, 16.5)	8.0 (5.3, 10.8)	7.9 (6.7, 9.1)	4.6 (0.5, 8.8) 0.028	4.5 (-0.3, 9.3) 0.07

Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

[a] Using the direct method and the observed age distribution across all 9 cohorts, age- and smoking-adjusted absolute incidence density rates, and their differences were calculated per 1,000 person-years for each lung function category.

[b] No CHD deaths reported in individuals with Obstructive spirometry.

eTable 7. Age and Smoking-Adjusted Absolute Incidence Rates for Respiratory-Related Events, Stratified by Cohort

	Number of events / at risk (Cum. Inc.)	Median follow-up in years (Q1, Q3)	IDR/1,000 person-years (95% CI)[a]			Difference in IDR /1,000 person-years (95% CI) p-value	
			PRISm	Obstructive Spirometry	Normal Spirometry	PRISm vs Normal Spirometry	PRISm vs Obstructive Spirometry
ARIC	2,476 / 13,373 (18.5)	21.3 (13.5, 26.3)	12.3 (10.6, 13.9)	18.1 (17.1, 19.2)	5.7 (5.3, 6.1)	6.6 (4.9, 8.2) <.001	-5.9 (-7.8, -3.9) <.001
CHS	1,172 / 4,756 (24.6)	11.9 (6.4, 18.1)	16.8 (13, 20.6)	33.1 (30.7, 35.5)	10.7 (9.5, 11.8)	6.2 (2.2, 10.1) 0.002	-16.2 (-20.8, -11.7) <.001
HABC	288 / 2,567 (11.2)	12.2 (7.0, 16.3)	12.6 (7.9, 17.4)	23.9 (20.1, 27.8)	4.7 (3.7, 5.7)	7.9 (3.1, 12.8) 0.001	-11.3 (-17.4, -5.2) <.001
MESA	165 / 4,384 (3.8)	11.2 (6.7, 12.0)	7.3 (4.1, 10.5)	7.7 (6, 9.3)	2.1 (1.5, 2.6)	5.2 (2.0, 8.5) 0.002	-0.4 (-4, 3.2) 0.83

Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

[a] Using the direct method and the observed age distribution across all 9 cohorts, age- and smoking-adjusted absolute incidence density rates, and their differences were calculated per 1,000 person-years for each lung function category.

eTable 8. Age and Smoking-Adjusted Absolute Incidence Rates for Coronary Heart Disease (CHD)-Related Events, Stratified by Cohort

	Number of events / at risk (Cum. Inc.)	Median follow-up in years (Q1, Q3)	IDR/1,000 person-years (95% CI)[a]			Difference in IDR /1,000 person-years (95% CI) p-value	
			PRISm	Obstructive Spirometry	Normal Spirometry	PRISm vs Normal Spirometry	PRISm vs Obstructive Spirometry
ARIC	2,454 / 14,830 (16.6)	26.5 (18.5, 28.1)	13.2 (11.4, 14.9)	8.7 (8.0, 9.5)	6.7 (6.4, 7.1)	6.4 (4.7, 8.2) <.001	4.4 (2.6, 6.3) <.001
CARDIA	102 / 4,993 (2.0)	29.3 (28.2, 30.0)	1.7 (0.5, 2.9)	0.7 (0.0, 1.3)	0.7 (0.6, 0.8)	1.0 (-0.2, 2.2) 0.10	1.0 (-0.3, 2.4) 0.14
CHS	1,452 / 3,829 (37.9)	14.2 (8.5, 18.5)	34.1 (27.7, 40.5)	35.9 (33.0, 38.9)	27.7 (25.7, 29.8)	6.3 (-0.4, 13.0) 0.06	-1.9 (-8.9, 5.2) 0.60
FOC	483 / 3,680 (13.1)	21.9 (17.5, 26.5)	10.0 (7.1, 12.9)	6.5 (5.2, 7.8)	6.4 (5.7, 7.1)	3.6 (0.6, 6.6) 0.02	3.5 (0.3, 6.7) 0.03
HABC	341 / 2,347 (14.5)	12.5 (7.8, 16.4)	18.7 (12.2, 25.2)	14.0 (11.0, 17.0)	11.4 (9.9, 12.9)	7.3 (0.6, 14.0) 0.03	4.7 (-2.4, 11.9) 0.20
JHS	64 / 2,291 (2.8)	13.8 (13.1, 14.5)	3.0 (1.4, 4.6)	4.8 (-0.1, 9.8)	2.1 (1.5, 2.8)	0.9 (-0.9, 2.6) 0.33	-1.8 (-7.1, 3.4) 0.49
MESA	185 / 4,401 (4.2)	11.2 (6.9, 12.1)	8.6 (5.1, 12.1)	4.6 (3.2, 5.9)	4.1 (3.3, 4.9)	4.5 (0.9, 8.1) 0.02	4.0 (0.2, 7.8) 0.04
SHS	471 / 1,697 (27.8)	19.6 (10.6, 22.1)	21.3 (15.7, 27.0)	17.8 (13.4, 22.1)	18.9 (16.9, 20.9)	2.5 (-3.6, 8.5) 0.42	3.6 (-3.6, 10.7) 0.33

Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

[a] Using the direct method and the observed age distribution across all 9 cohorts, age- and smoking-adjusted absolute incidence density rates, and their differences were calculated per 1,000 person-years for each lung function category.

eTable 9. Baseline Characteristics of Subjects by Lower Limit of Normal (LLN)-Defined Lung Function Categories

	Total	PRISm-LLN ($FEV_1/FVC \geq$ LLN & $FEV_1<$ LLN)	Obstructive Spirometry-LLN $FEV_1/FVC <$ LLN	Normal Spirometry-LLN ($FEV_1/FVC \geq$ LLN & $FEV_1 \geq$ LLN)
N (row %)	53,701	3,065 (5.7)	7,720 (14.4)	42,916 (79.9)
Age, mean (SD)	53.2 (15.8)	54.9 (14.2)	63.0 (12.0)	50.7 (15.9)
Age group, N (%)				
< 30 years	6,558 (12.2)	372 (12.1)	663 (8.6)	5,523 (12.9)
30-39 years	3,493 (6.5)	174 (5.7)	279 (3.6)	3,040 (7.1)
40-49 years	8,599 (16.0)	533 (17.4)	979 (12.7)	7,087 (16.5)
50-59 years	15,358 (28.6)	897 (28.3)	2,334 (30.2)	12,127 (28.3)
60-69 years	10,714 (20.0)	569 (18.6)	2,012 (26.1)	8,133 (19.0)
70-79 years	7,311 (13.6)	430 (14.0)	1,178 (15.3)	5,703 (13.3)
>80 years	1,668 (3.1)	90 (2.9)	275 (3.6)	1,303 (3.0)
Sex, N (%)				
Female	30,288 (56.4)	1,832 (59.8)	3,746 (48.5)	24,710 (57.6)
Male	23,413 (43.6)	1,233 (40.2)	3,974 (51.5)	18,206 (42.4)
Race, N (%)				
American Indian / Alaskan Native	1,779 (3.3)	106 (3.5)	231 (3.0)	1,442 (3.4)
Black	11,672 (21.7)	1,844 (60.2)	1,336 (17.3)	8,492 (19.8)
East Asian / Pacific Islander	659 (1.2)	52 (1.7)	75 (1.0)	532 (1.2)
Hispanic/Latino	14,597 (27.2)	543 (17.7)	1,129 (14.6)	12,925 (30.1)
non-Hispanic White	24,979 (46.5)	519 (16.9)	4,948 (64.1)	18,512 (45.5)
Other	15 (0.03)	1 (0.03)	1 (0.03)	13 (0.03)
Education, N (%) [a]				
Less than high school	7,856 (14.6)	513 (16.7)	1,229 (15.9)	6,117 (14.3)
High school	14,739 (27.5)	762 (24.9)	2,180 (28.2)	11,803 (27.5)
Some college	8,543 (15.9)	478 (15.6)	1,158 (15.0)	6,919 (16.1)
College or more	22,563 (42.0)	1,312 (42.8)	3,153 (40.8)	18,076 (42.1)

	Total	PRISm-LLN (FEV_1/FVC ≥ LLN & FEV_1< LLN)	Obstructive spirometry-LLN FEV_1/FVC < LLN	Normal Spirometry-LLN (FEV_1/FVC ≥ LLN & FEV_1≥ LLN)
Smoking Status, N (%) [a]				
Never	26,048 (48.5)	1,478 (48.2)	2,057 (26.6)	22,513 (52.5)
Ever	27,653 (51.5)	1,588 (51.7)	5,663 (73.4)	20,403 (47.5)
Current smokers among ever smokers	10,989 (39.7)	784 (49.4)	2,843 (50.2)	7,364 (36.1)
Pack-years among ever smokers, median (Q1,Q3)	15.4 (4.5, 34.0)	18.0 (6.0, 36.2)	30.9 (13.2, 48.0)	12.0 (3.5, 29.0)
Body Mass Index, mean (SD) [a]	28.1 (5.8)	30.8 (7.6)	26.6 (5.2)	28.2 (5.7)
FEV_1 % predicted, mean (SD)	97.0 (18.2)	75.1 (9.4)	80.6 (20.4)	103.4 (13.4)
FVC % predicted, mean (SD)	102.1 (17.1)	78.1 (11.4)	100.3 (20.1)	105.4 (14.4)
Co-morbidities, N (%) [a]				
Hypertension[b]	22,528 (42.0)	1,828 (59.6)	3,477 (45.0)	17,225 (40.1)
Diabetes[c]	7,736 (14.4)	757 (24.7)	856 (11.1)	6,123 (14.3)
Chronic lower respiratory disease[d]	6,059 (11.3)	510 (16.6)	1,822 (23.6)	3,737 (8.7)
Asthma[e]	4,567 (8.5)	387 (12.6)	1,268 (16.4)	2,922 (6.8)
Heart failure[f]	3,133 (5.8)	251 (8.2)	788 (10.2)	2,094 (4.9)
Coronary heart disease[f]	2,886 (5.4)	252 (8.2)	608 (7.9)	2,025 (4.7)
Stroke[f]	945 (1.8)	124 (4.0)	177 (2.4)	639 (1.5)
eGFR[g] (mL/min/1.73m^2)				
≥60	44,669 (83.2)	2,636 (86.0)	6,098 (79.0)	35,824 (83.5)
30-59	8,686 (16.2)	387 (12.6)	1,562 (20.2)	6,835 (15.9)
<30	364 (0.6)	42 (1.4)	60 (0.8)	258 (0.6)
	Total	**PRISm-LLN**	**Obstructive spirometry-LLN**	**Normal**

		(FEV$_1$/FVC ≥ LLN & FEV$_1$< LLN)	FEV$_1$/FVC < LLN	Spirometry-LLN (FEV$_1$/FVC ≥ LLN & FEV$_1$≥ LLN)
Cohort, N (row %)				
ARIC	14,944	693 (4.6)	3,044 (20.4)	11,207 (75)
HCHS/SOL	13,625	506 (3.7)	1,044 (7.7)	12,075 (88.6)
CARDIA	5,004	353 (7.1)	578 (11.6)	4,073 (81.4)
CHS	4,814	261 (5.4)	1,069 (22.2)	3,484 (72.4)
MESA	4,585	305 (6.7)	587 (12.8)	3,693 (80.5)
FOC	3,898	85 (2.2)	768 (19.7)	3,045 (78.1)
HABC	2,578	149 (5.8)	284 (11.0)	2,145 (83.2)
JHS	2,498	609 (24.4)	121 (4.8)	1,768 (70.8)
SHS	1,755	104 (5.9)	225 (12.8)	1,426 (81.3)

Data is represented as N (column %), or mean SD (standard deviation, SD), or median (interquartile range, denoted as Q1, Q3) unless otherwise noted
FEV$_1$ = Forced expiratory volume in one second; FVC = Forced vital capacity; eGFR = estimated glomerular filtration rate
ARIC = Atherosclerosis Risk in Communities study; CARDIA = Coronary Artery Risk Development in Young Adults study; CHS = Cardiovascular Health Study; FOC = Framingham Offspring cohort; HABC = Health ABC study; HCHS/SOL = Hispanic Community Health Study / Study of Latinos; JHS = Jackson Heart Study; MESA = Multi-Ethnic Study of Atherosclerosis; SHS = Strong Heart Study
"Other" race category includes self-identified "other" race and individuals of mixed-race.
Lung function categories were defined as: PRISm-LLN = FEV$_1$/FVC≥LLN, FEV$_1$<LLN; Obstructive Spirometry-LLN = FEV$_1$/FVC<LLN; Normal Spirometry-LLN= FEV$_1$/FVC≥LLN, FEV$_1$≥LLN. **Based on GLI equations for "Other" race.**
All P-value for comparison between PRISm and normal spirometry from Student's t-test or Wilcoxon rank sum test for continuous variables as appropriate and Chi-squared test for categorical variables were <.001.
[a] Values represent average over 10 imputed datasets
[b] Self-reported hypertension or systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg or use of anti-hypertensive medications
[c] Self-reported diabetes or fasting blood sugar level ≥ 126 mg/dl or use of oral hypoglycemic agents or insulin
[d] Self-reported physician diagnosed chronic obstructive pulmonary disease, chronic bronchitis, or emphysema
[e] Self-reported physician diagnosed asthma
[f] Data on comorbidities at baseline, including coronary heart disease, congestive heart failure (HF), and stroke were self-reported. If missing, data was obtained from hospitalization records prior to baseline spirometry. In JHS, neither self-reported information on HF nor hospitalization records prior to baseline spirometry were available. Therefore, baseline HF was defined as HF events occurring within 5 years of baseline spirometry.
[g] For baseline eGFR, measurements obtained at baseline spirometry visit were used. If missing, first available eGFR measurements were used.

eTable 10. Associations Between Lung Function Category Defined Using GLI Equations for Lower Limit of Normal (LLN), All-Cause, Respiratory, and Coronary Heart Disease (CHD) Mortality, as Well as Respiratory-Related and CHD-Related Hospitalizations and Mortality

	At risk	Median Follow-Up in Years (IQR)	Events (Cumulative Incidence)	Incidence density rate /1,000 person-years	Lung Function Category (reference: Normal Spirometry-LLN)	HR [95% CI]
All-cause mortality[a]	39,835	19.4 (12.1, 27.6)	15,661 (39.3)	21	PRISm-LLN	1.59 [1.49, 1.70]
					Obstructive Spirometry-LLN	1.44 [1.39, 1.50]
Respiratory Mortality[b]	31,998	19.6 (11.5, 27.8)	1,100 (3.4)	2	PRISm-LLN	2.18 [1.63, 2.91]
					Obstructive Spirometry-LLN	4.05 [3.56, 4.61]
CHD mortality[a]	39,628	19.6 (12.1, 27.6)	2,352 (5.9)	3	PRISm-LLN	1.51 [1.29, 1.78]
					Obstructive Spirometry-LLN	1.17 [1.05, 1.30]
Respiratory-related events[c]	25,080	14.3 (8.9, 22.9)	4,101 (16.4)	11	PRISm-LLN	2.36 [2.07, 2.70]
					Obstructive Spirometry-LLN	3.40 [3.17, 3.63]
CHD-related events[a]	38,068	20.4 (12.3, 27.7)	5,552 (14.6)	8	PRISm-LLN	1.29 [1.15, 1.44]
					Obstructive Spirometry-LLN	1.09 [1.02, 1.17]

Lung function categories were defined as: PRISm-LLN = $FEV_1/FVC \geq LLN$, $FEV_1 < LLN$; Obstructive Spirometry-LLN = $FEV_1/FVC < LLN$; Normal Spirometry-LLN= $FEV_1/FVC \geq LLN$, $FEV_1 \geq LLN$. **Based on GLI equations for "Other" race.**
Cox proportional hazards models were was adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate; cohort was treated as a stratum variable.
[a] Cohorts included: Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Framingham Offspring Cohort (FOC), Health, Aging, and Body Composition (Health ABC), Jackson Heart Study (JHS), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)
[b] Cohorts included: ARIC, CHS, CARDIA, Health ABC, MESA, SHS
[c] Cohorts included: ARIC, CHS, Health ABC, MESA

eTable 11. Associations Between Lung Function Category, All-Cause, Respiratory, and Coronary Heart Disease (CHD) Mortality, as Well as Respiratory-Related and CHD-Related Hospitalizations and Mortality, Additionally Adjusting for Baseline FEV_1:FVC

	At risk	Median Follow-Up in Years (IQR)	Events (Cumulative Incidence)	Incidence density rate /1,000 person-years	Lung Function Category (reference: Normal Spirometry)	HR [95% CI]
All-cause mortality[a]	39,835	19.4 (12.1, 27.6)	15,661 (39.3)	21	PRISm	1.47 [1.39, 1.55]
					Obstructive Spirometry	1.10 [1.04, 1.16]
Respiratory mortality[b]	31,998	19.6 (11.5, 27.8)	1,100 (3.4)	2	PRISm	1.79 [1.41, 2.27]
					Obstructive Spirometry	0.99 [0.83, 1.19]
CHD mortality[a]	39,628	19.6 (12.1, 27.6)	2,352 (5.9)	3	PRISm	1.54 [1.35, 1.76]
					Obstructive Spirometry	1.11 [0.97, 1.27]
Respiratory-related events[c]	25,080	14.3 (8.9, 22.9)	4,101 (16.4)	11	PRISm	1.82 [1.62, 2.04]
					Obstructive Spirometry	1.49 [1.36, 1.64]
CHD-related events[a]	38,068	20.4 (12.3, 27.7)	5,552 (14.6)	8	PRISm	1.29 [1.18, 1.42]
					Obstructive Spirometry	1.13 [1.03, 1.24]

Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive Spirometry = $FEV_1/FVC < 0.7$; Normal Spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, estimated glomerular filtration rate, and baseline FEV1/FVC; cohort was treated as a stratum variable.

[a] Cohorts included: Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Framingham Offspring Cohort (FOC), Health, Aging, and Body Composition (Health ABC), Jackson Heart Study (JHS), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)

[b] Cohorts included: ARIC, CHS, CARDIA, Health ABC, MESA, SHS

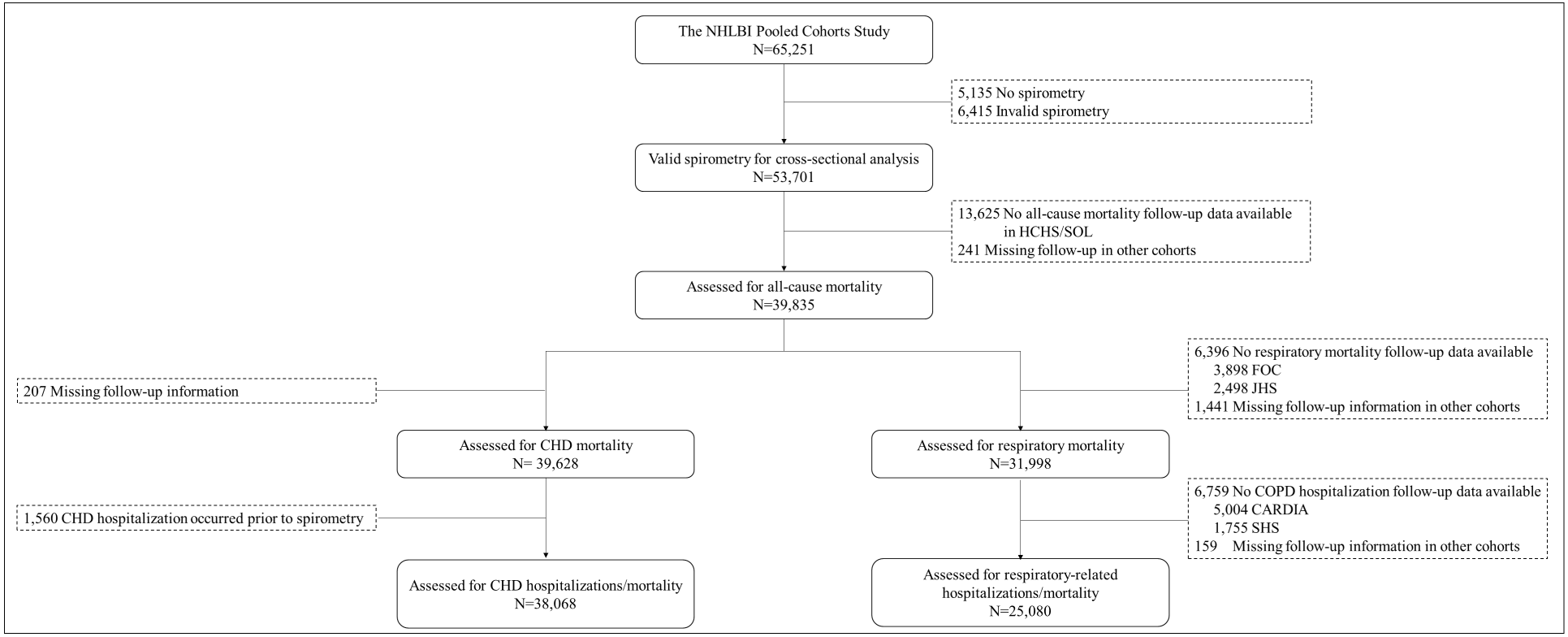
[c] Cohorts included: ARIC, CHS, Health ABC, MESA

eTable 12. Associations Between Lung Function Category, Mortality, CHD Events, and Respiratory-Related Events, Complete Case Analysis

	At risk	Median Follow-Up in Years (IQR)	Events (Cumulative Incidence)	Incidence density rate /1,000 person-years	Lung Function Category (reference: Normal Spirometry)	HR [95% CI]
All-cause mortality[a]	26,994	17.5 (11.9, 28.0)	8,105 (30.0)	16	PRISm	1.47 [1.36, 1.59]
					Obstructive Spirometry	1.32 [1.25, 1.39]
Respiratory mortality[b]	20,871	17.6 (11.2, 28.4)	616 (3.0)	2	PRISm	1.83 [1.35, 2.50]
					Obstructive Spirometry	2.73 [2.28, 3.27]
CHD mortality[a]	26,790	17.7 (11.9, 28.0)	1,521 (5.7)	3	PRISm	1.35 [1.13, 1.61]
					Obstructive Spirometry	1.16 [1.04, 1.31]
Respiratory-related events[c]	15,424	12.8 (8.4, 21.9)	1,986 (12.9)	9	PRISm	1.78 [1.50, 2.12]
					Obstructive Spirometry	3.04 [2.75, 3.36]
CHD-related events[a]	25,504	18.8 (12.1, 28.2)	3,258 (12.8)	7	PRISm	1.13 [0.99, 1.28]
					Obstructive Spirometry	1.06 [0.98, 1.16]

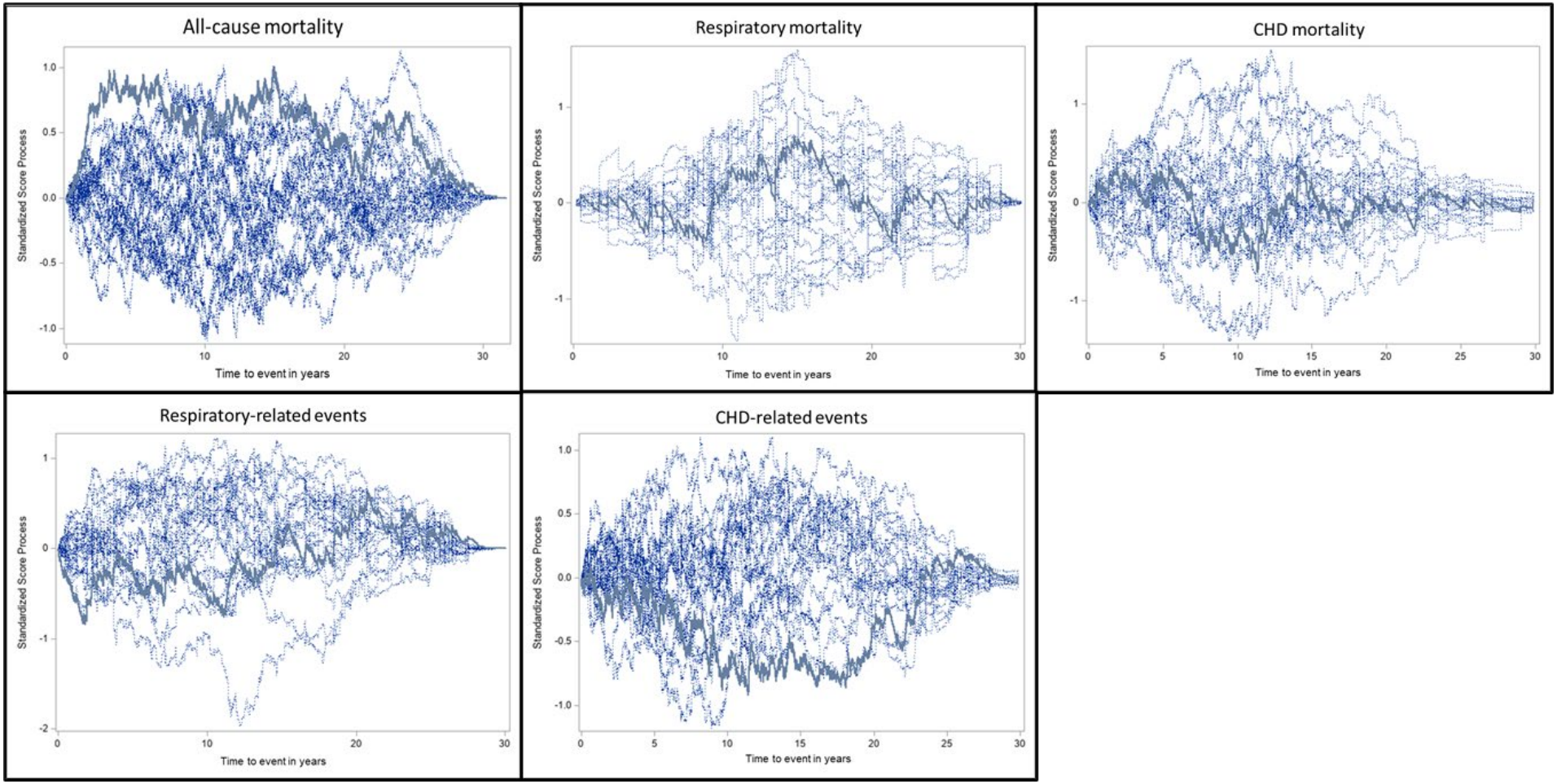
Lung function categories were defined as: PRISm = FEV1/FVC≥0.7, FEV1<80%; Obstructive Spirometry = FEV1/FVC<0.7; Normal Spirometry= FEV1/FVC≥0.7, FEV1≥80%.
Cox proportional hazards models were was adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate; cohort was treated as a stratum variable.
[a] Cohorts included: Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Framingham Offspring Cohort (FOC), Health, Aging, and Body Composition (Health ABC), Jackson Heart Study (JHS), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)
[b] Cohorts included: ARIC, CHS, CARDIA, Health ABC, MESA, SHS
[c] Cohorts included: ARIC, CHS, Health ABC, MESA

eFigure 1. CONSORT

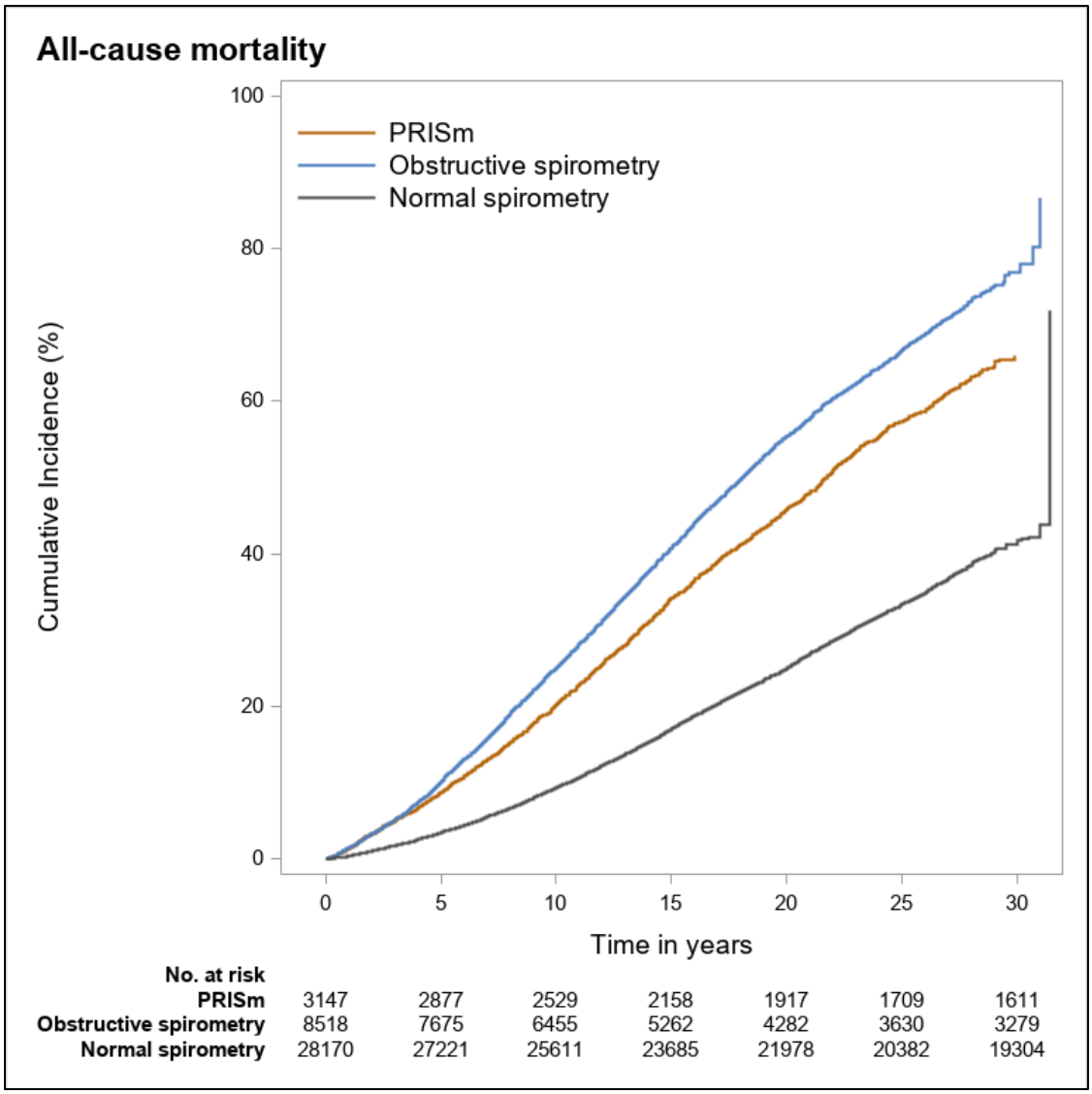


Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Framingham Offspring Cohort (FOC), Health, Aging, and Body Composition (Health ABC), Hispanic Community health Study/Study of Latinos (HCHS/SOL) Jackson Heart Study (JHS), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)

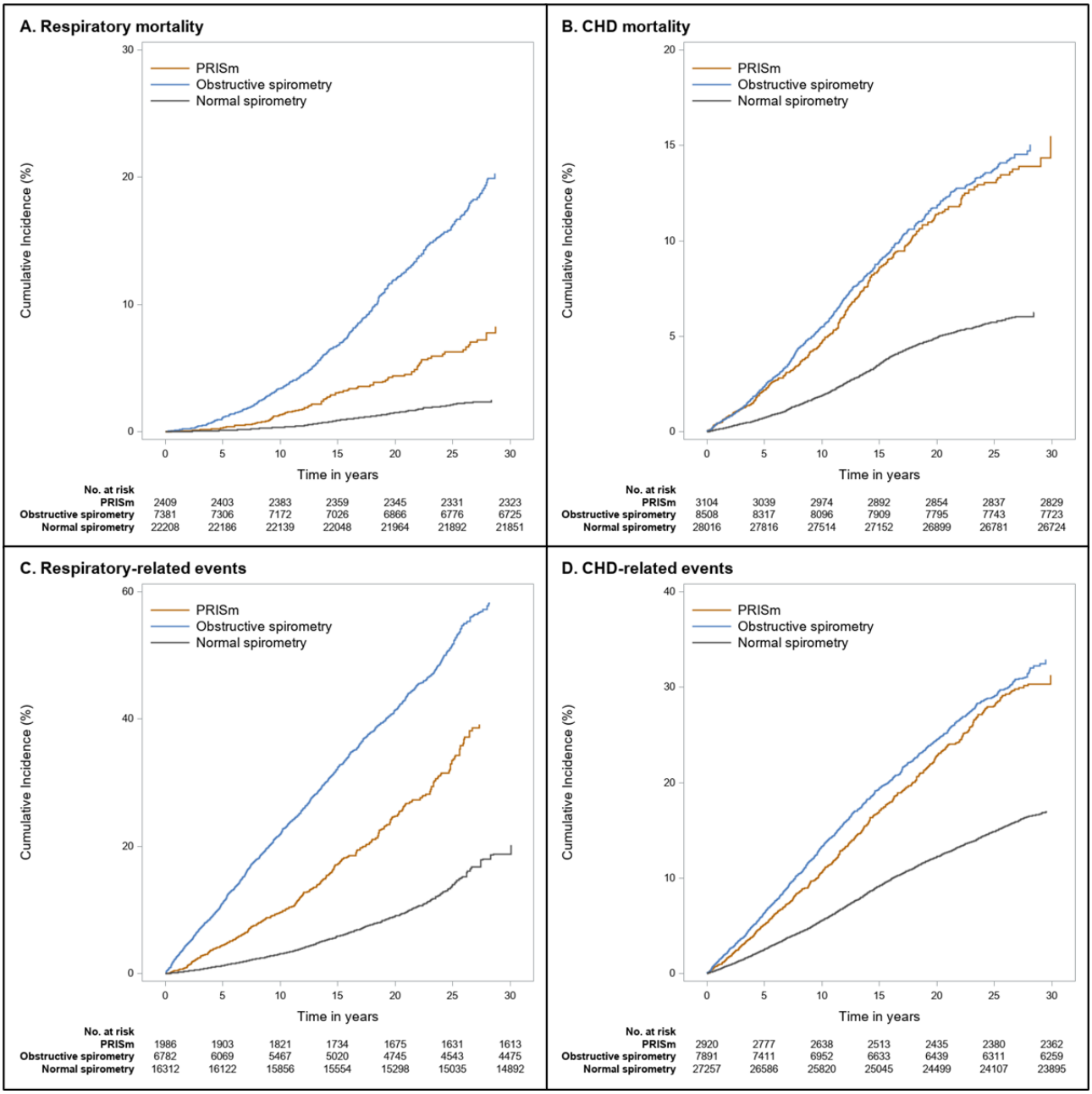
eFigure 2. Residual Plot for Checking the Proportional Hazards Assumption for PRISm and Mortality, CHD Events, and Respiratory-Related Events



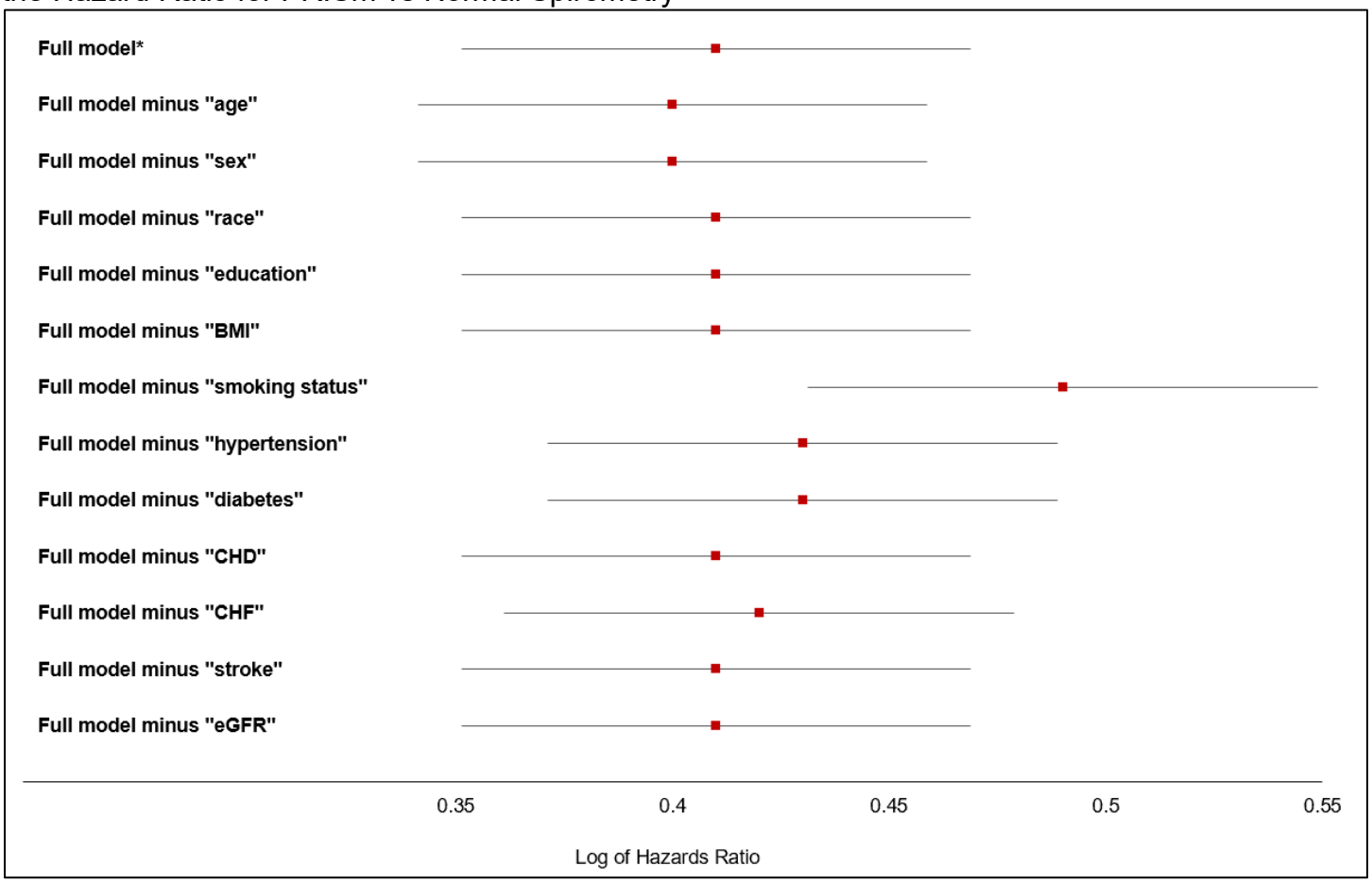
eFigure 3. Unadjusted Cumulative Incidence of All-Cause Mortality by Lung Function Category



eFigure 4. Unadjusted Cumulative Incidence of Respiratory- and Coronary Heart Disease (CHD) Mortality, and Respiratory-Related and CHD-Related Hospitalizations and Mortality by Lung Function Category

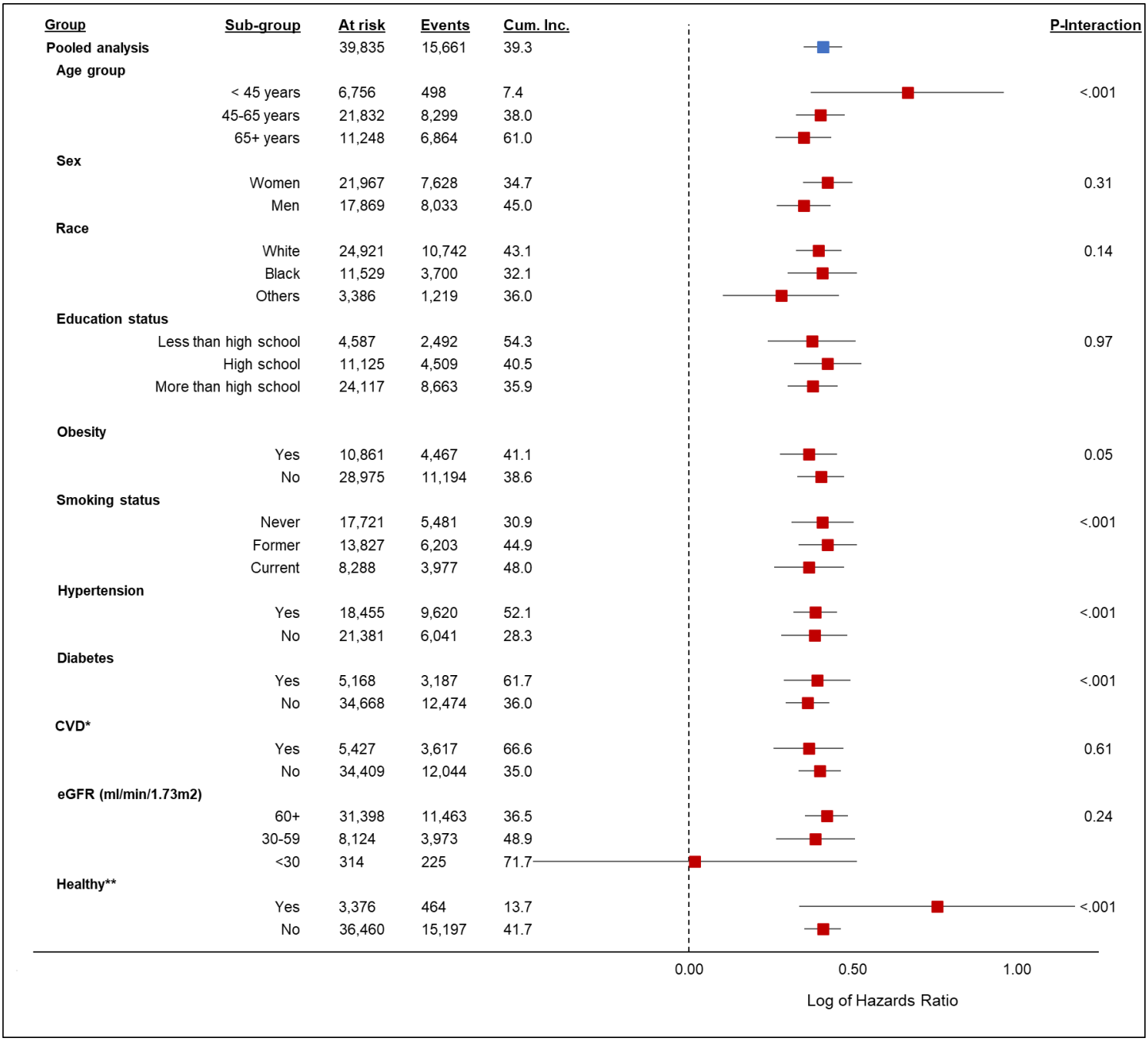


eFigure 5. Effects of Omitting Covariates From the Fully Adjusted Model for All-Cause Mortality on the Hazard Ratio for PRISm vs Normal Spirometry



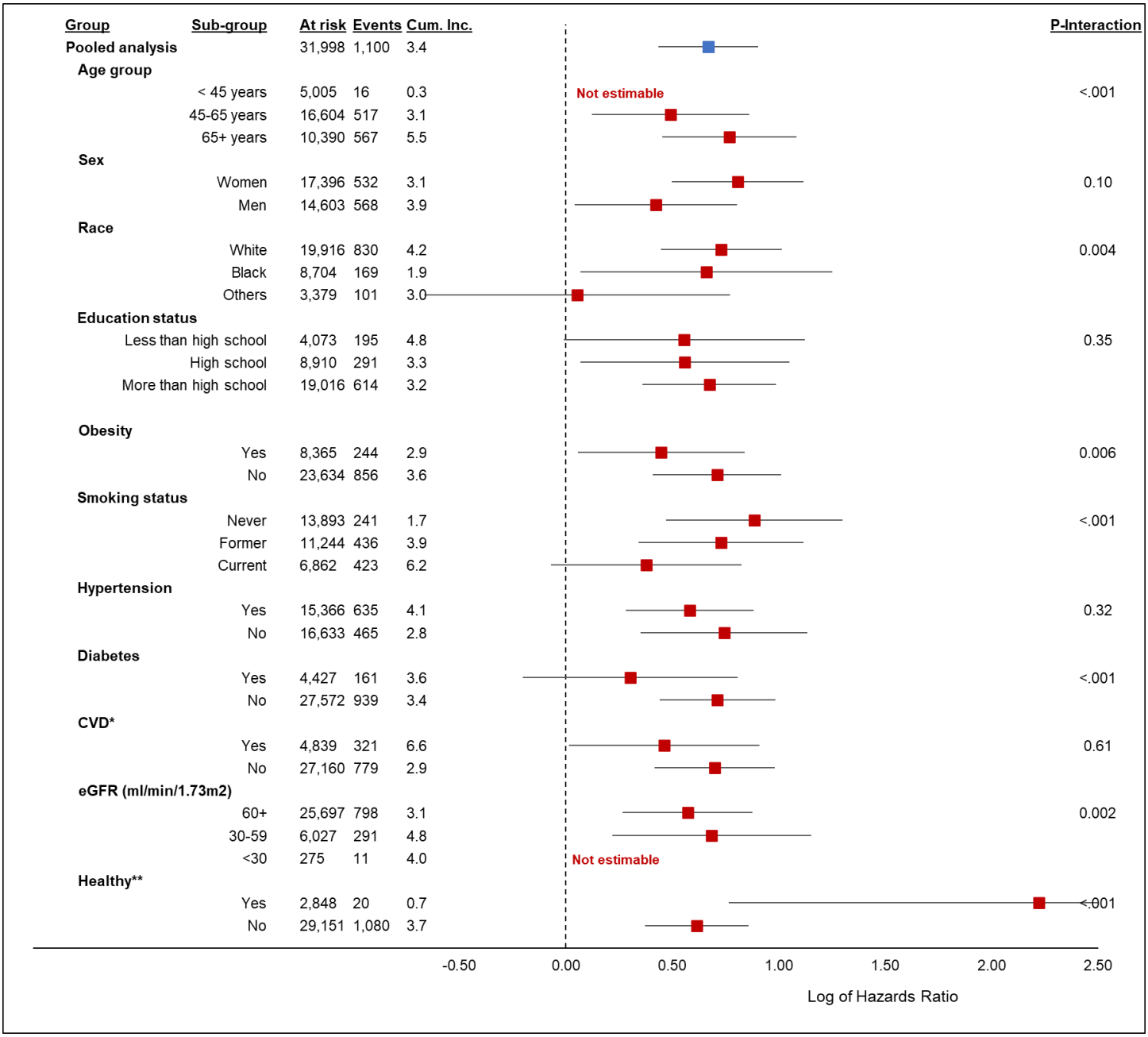
Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.
* Cox proportional hazards full model was adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease (CHD), congestive heart failure (CHF), stroke, and estimated glomerular filtration rate (eGFR); cohort was treated as a stratum variable.
Cohorts included: Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Framingham Offspring Cohort (FOC), Health, Aging, and Body Composition (Health ABC), Jackson Heart Study (JHS), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)

eFigure 6. Forest Plot of Stratified Subgroup Analyses (PRISm vs Normal Spirometry) for All-Cause Mortality



Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.
Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate; cohort was treated as a stratum variable.
Cohorts included: Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Framingham Offspring Cohort (FOC), Health, Aging, and Body Composition (Health ABC), Jackson Heart Study (JHS), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)
*Cardio-vascular disease, which includes coronary heart disease, congestive heart failure, and stroke
**Healthy individuals are defined as non-smoking individuals with normal BMI and estimated glomerular filtration rate, and no medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, and stroke.

eFigure 7. Forest Plot of Stratified Subgroup Analyses (PRISm vs Normal Spirometry) for Respiratory Mortality



Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate; cohort was treated as a stratum variable.

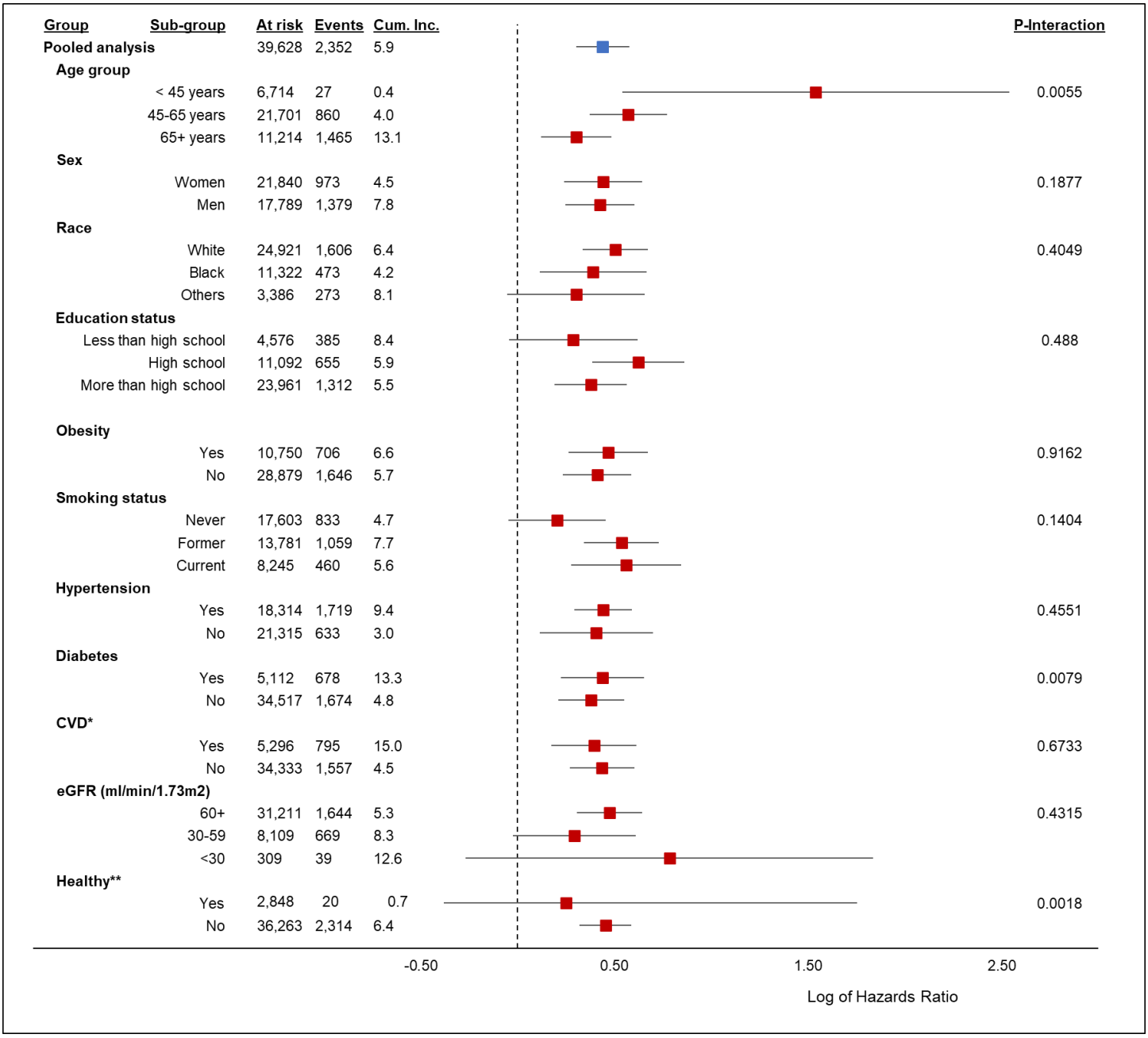
Cohorts included: Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Health, Aging, and Body Composition (Health ABC), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)

“Other” race category includes Hispanic, East Asian, and individuals of mixed race.

*Cardio-vascular disease, which includes coronary heart disease, congestive heart failure, and stroke

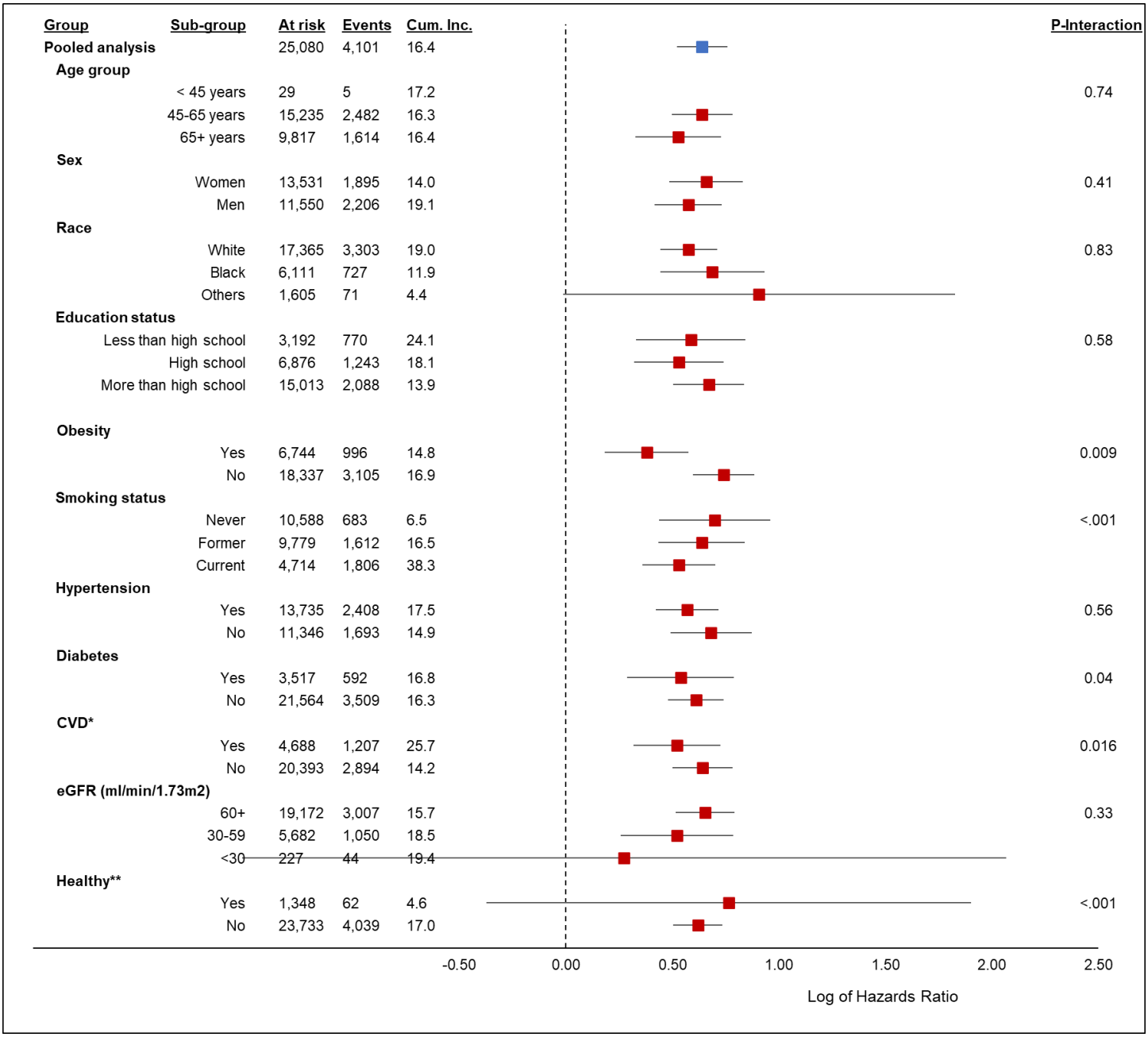
**Healthy individuals are defined as non-smoking individuals with normal BMI and estimated glomerular filtration rate, and no medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, and stroke.

eFigure 8. Forest Plot of Stratified Subgroup Analyses (PRISm vs Normal Spirometry) for CHD Mortality Events



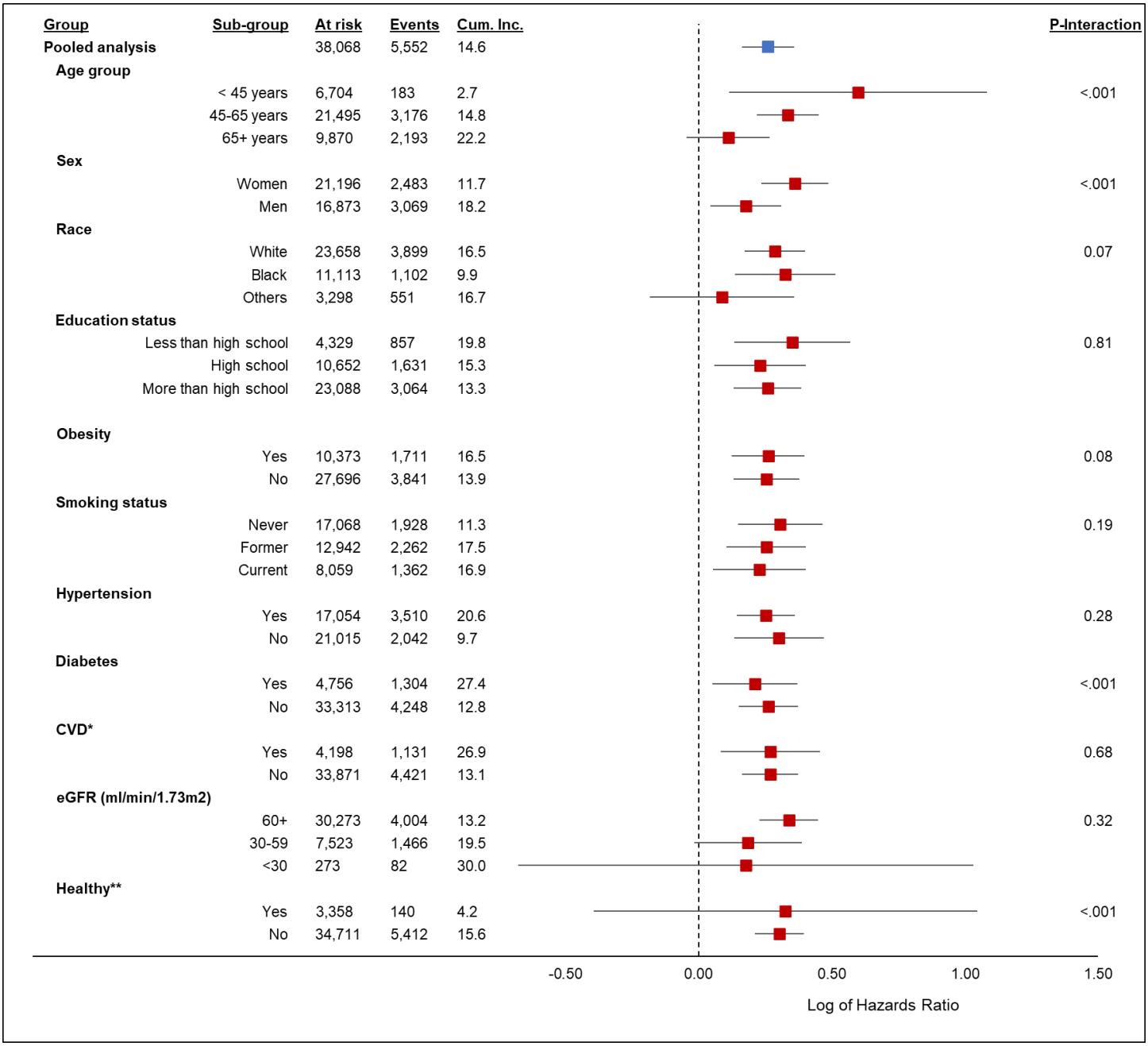
Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.
Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate; cohort was treated as a stratum variable.
Cohorts included: Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Framingham Offspring Cohort (FOC), Health, Aging, and Body Composition (Health ABC), Jackson Heart Study (JHS), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)
"Other" race category includes Hispanic, East Asian, and individuals of mixed race.
*Cardio-vascular disease, which includes coronary heart disease, congestive heart failure, and stroke
**Healthy individuals are defined as non-smoking individuals with normal BMI and estimated glomerular filtration rate, and no medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, and stroke.

eFigure 9. Forest Plot of Stratified Subgroup Analyses (PRISm vs Normal Spirometry) for Respiratory-Related Events



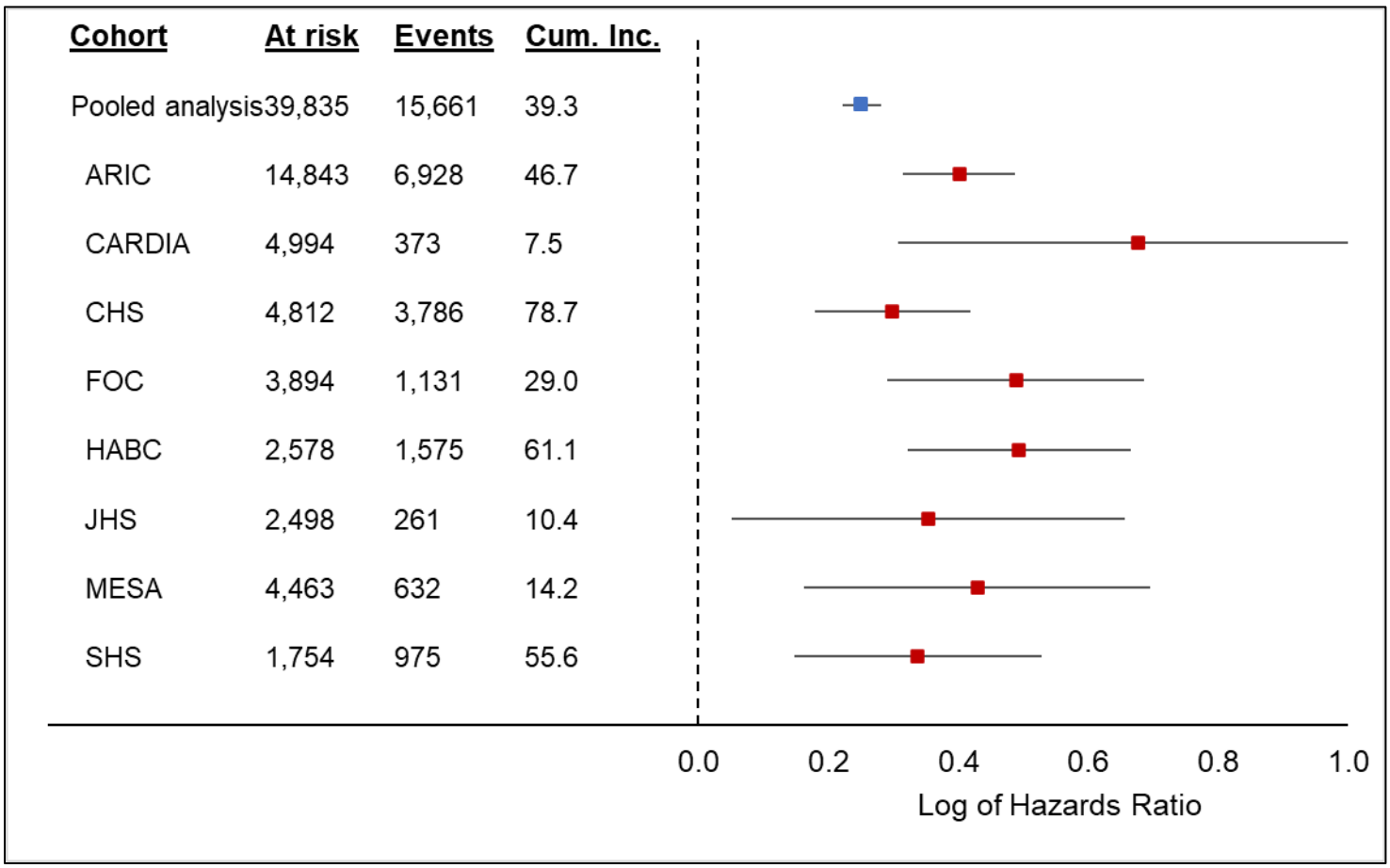
Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.
Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate; cohort was treated as a stratum variable.
Cohorts included: Atherosclerosis Risk in Communities (ARIC), Cardiovascular Health Study (CHS), Health, Aging, and Body Composition (Health ABC), and Multi-Ethnic Study of Atherosclerosis (MESA)
"Other" race category includes Hispanic, East Asian, and individuals of mixed race.
*Cardio-vascular disease, which includes coronary heart disease, congestive heart failure, and stroke
**Healthy individuals are defined as non-smoking individuals with normal BMI and estimated glomerular filtration rate, and no medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, and stroke.

eFigure 10. Forest Plot of Stratified Subgroup Analyses (PRISm vs Normal Spirometry) for CHD-Related Events



Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.
Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate; cohort was treated as a stratum variable.
Cohorts included: Atherosclerosis Risk in Communities (ARIC), Coronary Artery Risk Development in Young Adults (CARDIA), Cardiovascular Health Study (CHS), Framingham Offspring Cohort (FOC), Health, Aging, and Body Composition (Health ABC), Jackson Heart Study (JHS), Multi-Ethnic Study of Atherosclerosis (MESA), and Strong Heart Study (SHS)
“Other” race category includes Hispanic, East Asian, and individuals of mixed race.
*Cardio-vascular disease, which includes coronary heart disease, congestive heart failure, and stroke
**Healthy individuals are defined as non-smoking individuals with normal BMI and estimated glomerular filtration rate, and no medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, and stroke.

eFigure 11. Forest Plot of Cohort-Stratified Analyses (PRISm vs Normal Spirometry) for All-Cause Mortality

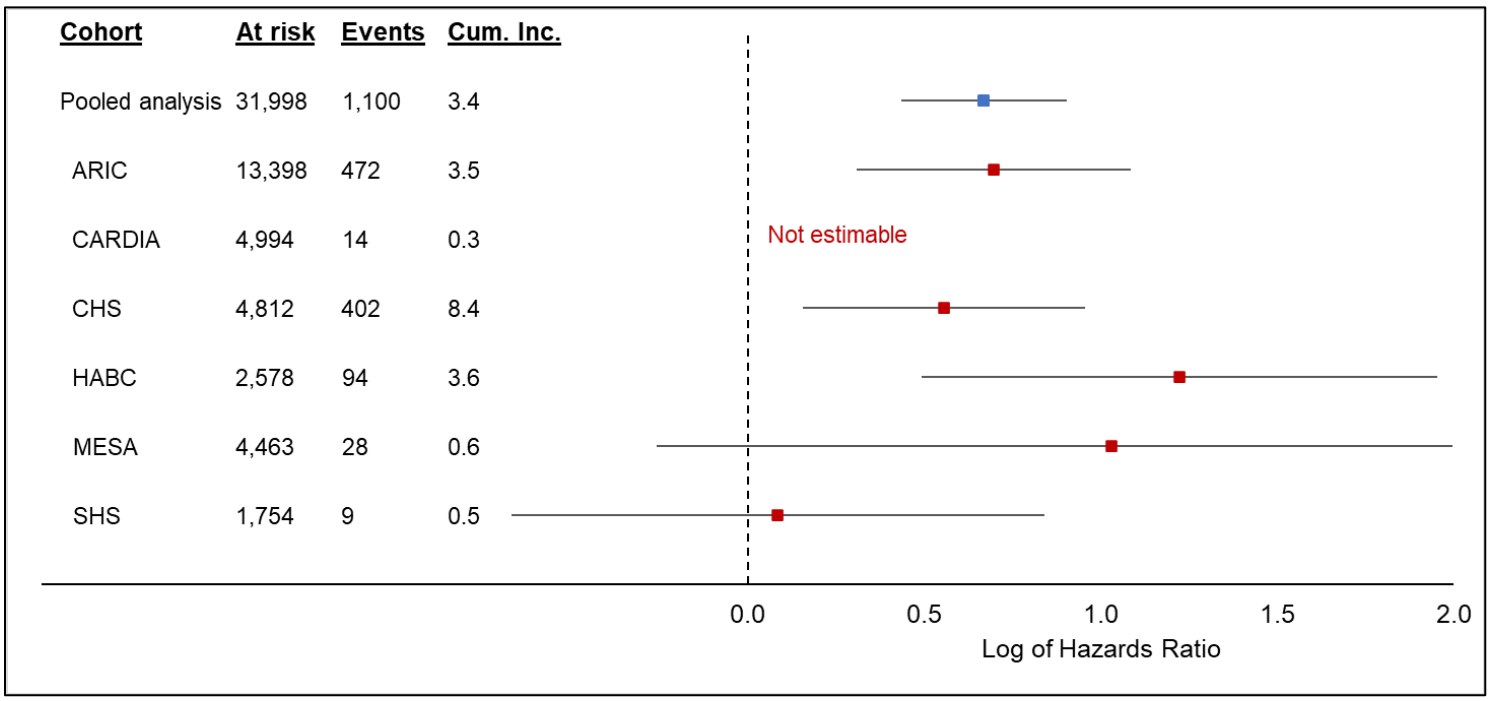


Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

ARIC = Atherosclerosis Risk in Communities study; CARDIA = Coronary Artery Risk Development in Young Adults study; CHS = Cardiovascular Health Study; FOC=Framingham Offspring Cohort; HABC = Health ABC study; JHS = Jackson Heart Study; MESA = Multi-Ethnic Study of Atherosclerosis; SHS = Strong Heart Study

Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate.

eFigure 12. Forest Plot of Cohort-Stratified Analyses (PRISm vs Normal Spirometry) for Respiratory Mortality

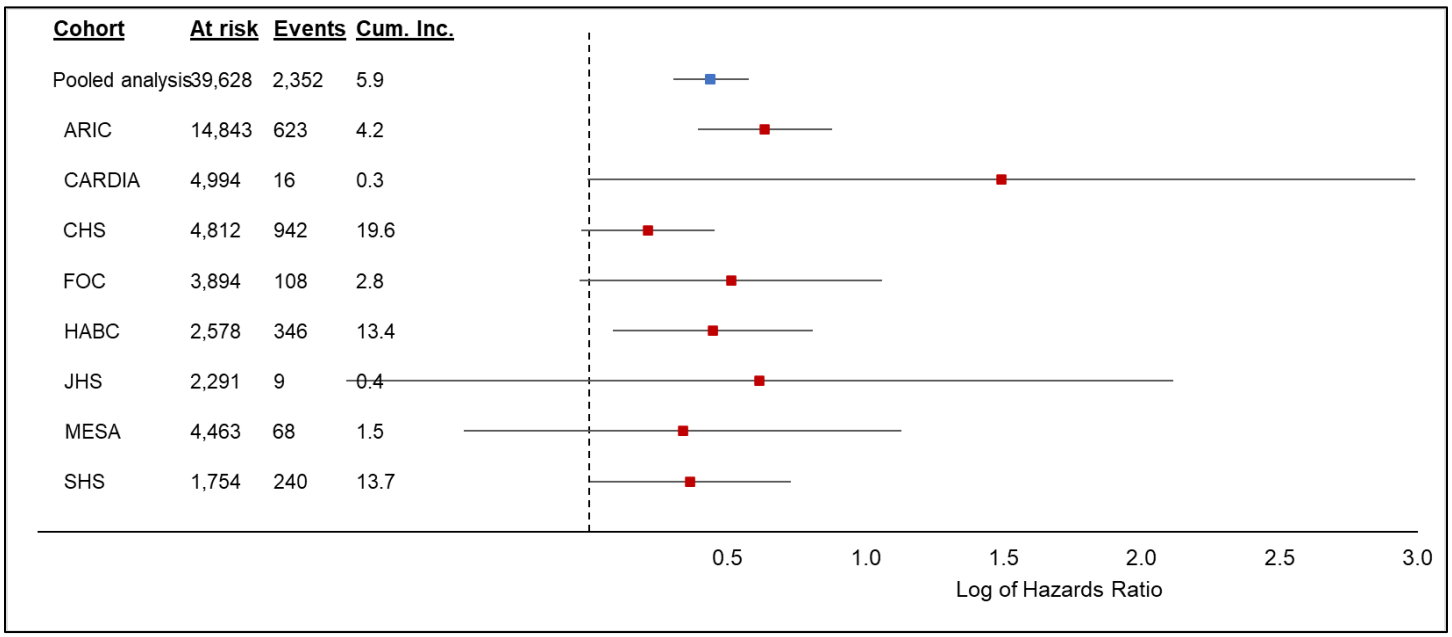


Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

ARIC = Atherosclerosis Risk in Communities study; CARDIA = Coronary Artery Risk Development in Young Adults study; CHS = Cardiovascular Health Study; HABC = Health ABC study; JHS = Jackson Heart Study; MESA = Multi-Ethnic Study of Atherosclerosis; SHS = Strong Heart Study

Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate

eFigure 13. Forest Plot of Cohort-Stratified Analyses (PRISm vs Normal Spirometry) for CHD Mortality

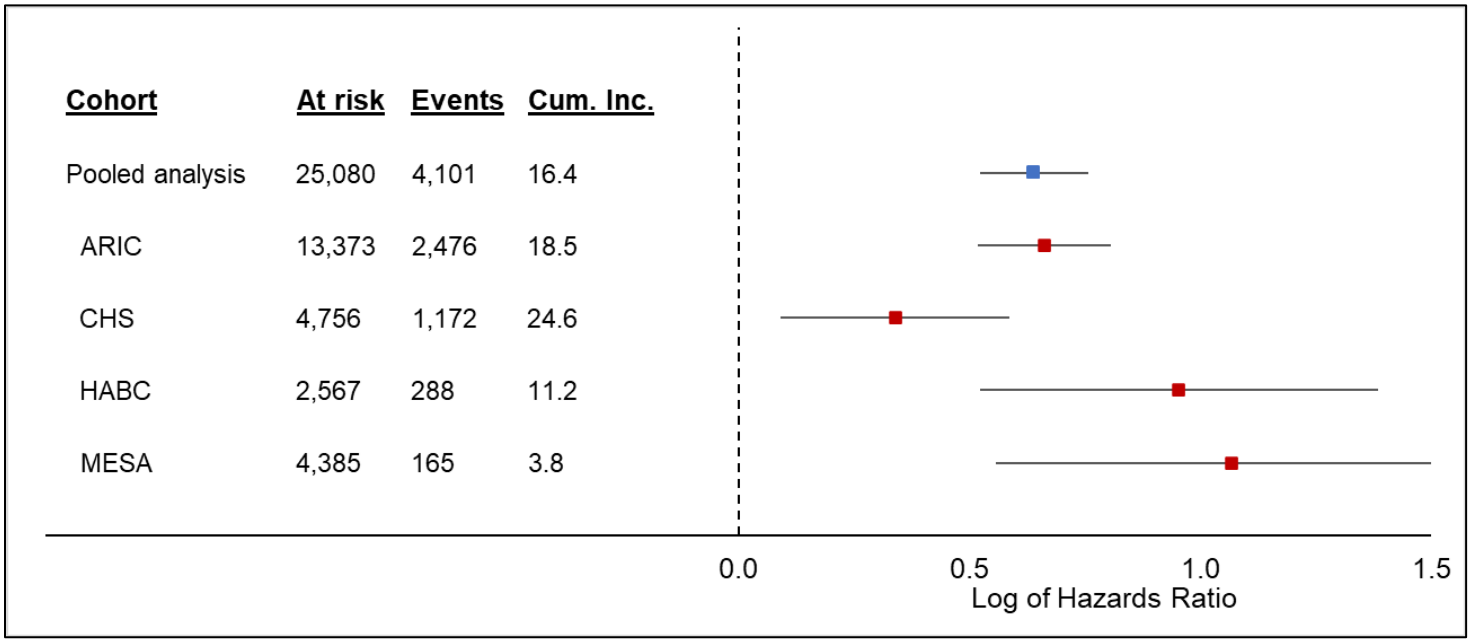


Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

ARIC = Atherosclerosis Risk in Communities study; CARDIA = Coronary Artery Risk Development in Young Adults study; CHS = Cardiovascular Health Study; FOC=Framingham Offspring Cohort; HABC = Health ABC study; JHS = Jackson Heart Study; MESA = Multi-Ethnic Study of Atherosclerosis; SHS = Strong Heart Study

Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate.

eFigure 14. Forest Plot of Cohort-Stratified Analyses (PRISm vs Normal Spirometry) for Respiratory-Related Events

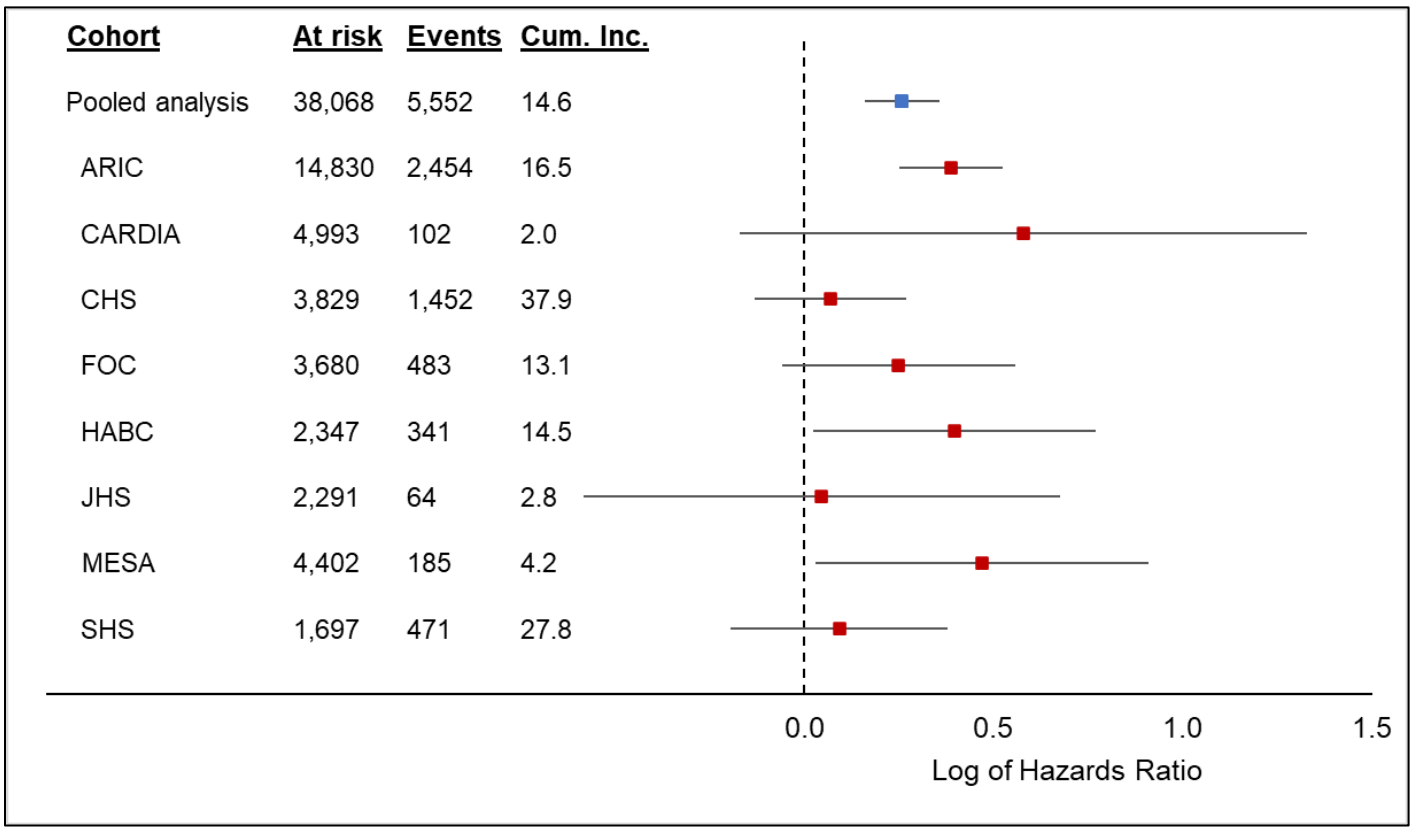


Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

ARIC = Atherosclerosis Risk in Communities study; CHS = Cardiovascular Health Study; HABC = Health ABC study; MESA = Multi-Ethnic Study of Atherosclerosis

Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated glomerular filtration rate.

eFigure 15. Forest Plot of Cohort-Stratified Analyses (PRISm vs Normal Spirometry) for CHD-Related Events



Lung function categories were defined as: PRISm = $FEV_1/FVC \geq 0.7$, $FEV_1 < 80\%$; Obstructive spirometry = $FEV_1/FVC < 0.7$; Normal spirometry= $FEV_1/FVC \geq 0.7$, $FEV_1 \geq 80\%$.

ARIC = Atherosclerosis Risk in Communities study; CARDIA = Coronary Artery Risk Development in Young Adults study; CHS = Cardiovascular Health Study; FOC=Framingham Offspring Cohort; HABC = Health ABC study; JHS = Jackson Heart Study; MESA = Multi-Ethnic Study of Atherosclerosis; SHS = Strong Heart Study

Cox proportional hazards models were adjusted for age, gender, race/ethnicity, education, body mass index, smoking status, medical comorbidities such as, hypertension, diabetes, coronary heart disease, congestive heart failure, stroke, and estimated