Table S1. Multivariable model of hazard ratios of sleep apnea with time-dependent survival analysis

	Hypertensive patients		Non-hypertensive patients	
	α1-adrenergic antagonist user (N=12733)	Non-α1-adrenergic antagonist user (N=12733)	α1-adrenergic antagonist user (N=9465)	Non-α1-adrenergic antagonist user (N=9465)
	n (%)	n (%)	n (%)	n (%)
Sleep apnea	233 (1.83)	121 (0.95)	130 (1.37)	50 (0.53)
Crude HR (95%CI)	2.10 (1.69-2.62)*	1	2.90 (2.06-4.02)*	1
Adjusted HR (95%CI)	2.09 (1.59-2.76)*	1	2.49 (1.71-3.64)*	1
Severe sleep apnea	97 (0.76)	41 (0.32)	35 (0.37)	9 (0.10)
Crude HR (95%CI)	2.58 (1.79-3.71)*	1	4.31 (2.07-8.96)*	1
Adjusted HR (95%CI)	4.30 (2.71-6.83)*	1	3.35 (1.57-7.13)*	1

Adjusted HR: Time-dependent Cox regression; Time-dependent covariates: each consecutive year of follow-up was classified as years with and without α1-adrenergic antagonists; Fixed covariates: age, geographic location, enrollee category, income, urbanization level, comorbidities.

* P value <0.05; † Using a stratified Cox regression model

Table S2. Multivariable model of hazard ratios of sleep apnea with time-dependent survival analysis and using non-hypertensive non-α1-adrenergic antagonist use cohort as reference

	Hypertensive patients		Non-hypertensive patients	
	α1-adrenergic antagonist user (N=8791)	Non-α1-adrenergic antagonist user (N=8791)	α1-adrenergic antagonist user (N=8791)	Non-α1-adrenergic antagonist user (N=8791)
	n (%)	n (%)	n (%)	n (%)
Sleep apnea	179 (2.04)	97 (1.10)	121 (1.38)	44 (0.50)
Crude HR (95%CI)	4.50 (3.24-6.26)*	2.26 (1.59-3.23)*	3.08 (2.18-4.35)*	1
Adjusted HR (95%CI)	2.24 (1.65-3.04)*	1.51 (1.17-1.95)*	1.76 (1.26-2.46)*	1
Severe sleep apnea	70 (0.80)	36 (0.41)	32 (0.36)	7 (0.08)
Crude HR (95%CI)	11.02 (5.07-23.97)*	5.27 (2.35-11.85)*	5.11 (2.26-11.58)*	1
Adjusted HR (95%CI)	5.50 (3.03-9.97)*	2.90 (1.68-5.00)*	3.55 (1.84-6.84)*	1

Adjusted HR: Time-dependent Cox regression; Time-dependent covariates: each consecutive year of follow-up was classified as years with and without α1-adrenergic antagonists; Fixed covariates: age, geographic location, enrollee category, income, urbanization level, comorbidities.

* P value <0.05; † Using a stratified Cox regression model

Table S3. Multivariable model of hazard ratios of sleep apnea with high and low doses of α1-adrenergic antagonist use

	Hypertensive patients			Non-hypertensive patients		
	0	Low	High	0	Low	High
	(N=12733)	(N=9603)	(N=3130)	(N=9465)	(N=7782)	(N=1683)
Sleep apnea	121 (0.95)	166 (1.73)	67 (2.14)	50 (0.53)	94 (1.21)	36 (2.14)
Crude HR	1	1.96 (1.55-2.48)*	2.57 (1.91-3.47)*	1	2.55 (1.81-3.60)*	4.48 (2.92-6.88)*
Adjusted HR1	1	1.96 (1.52-2.52)*	2.56 (1.69-3.86)*	1	2.35 (1.63-3.39)*	3.26 (1.76-6.05)*
Adjusted HR2	1	1.97 (1.51-2.57)*†	2.54 (1.67-3.89)*†	1	1.79 (1.19-2.68)*†	2.53 (1.25-5.16)*†
CRR	1	1.96 (1.50-2.56)*†	2.57 (1.67-3.96)*†	1	1.84 (1.25-2.70)*†	2.89 (1.51-5.53)*†
Severe sleep apnea	41 (0.32)	71 (0.74)	26 (0.83)	9 (0.10)	24 (0.31)	11 (0.65)
Crude HR	1	2.47 (1.68-3.62)*	2.94 (1.80-4.81)*	1	3.60 (1.67-7.75)*	7.54 (3.12-18.20)*
Adjusted HR1	1	2.39 (1.58-3.61)*	2.68 (1.39-5.18)*	1	3.51 (1.57-7.84)*	6.79 (1.84-25.00)*
Adjusted HR2	1	2.10 (1.37-3.24)*†	2.17 (1.10-4.25)*†	1	2.81 (1.12-7.06)*†	5.27 (1.14-24.39)*†
CRR	1	2.09 (1.38-3.17)*†	2.20 (1.14-4.24)*†	1	2.93 (1.29-6.65)*†	6.15 (1.47-25.75)*†

* P value <0.05; † Using a stratified Cox regression model

Figure S1. Sensitivity analysis with the addition of an unmeasured residual confounding factor. The estimates trend of α1-adrenergic-antagonist use in the hypertensive group, and the hazard ratio of sleep apnea, in a multivariable-adjusted Cox regression model.

Figure S2. Sensitivity analysis with the addition of an unmeasured residual confounding factor. The estimates trend of α1-adrenergic antagonist use in the non-hypertensive group, and the hazard ratio of sleep apnea, in a multivariable-adjusted Cox regression model.

Figure S3. Sensitivity analysis with the addition of an unmeasured residual confounding factor. The estimates trend of α1-adrenergic antagonist use in the hypertensive group, and the hazard ratio of severe sleep apnea, in a multivariable-adjusted Cox regression model.

Figure S4. Sensitivity analysis with the addition of an unmeasured residual confounding factor. The estimates trend of α1-adrenergic antagonist use in the non-hypertensive group, and hazard ratio of severe sleep apnea, in a multivariable-adjusted Cox regression model.

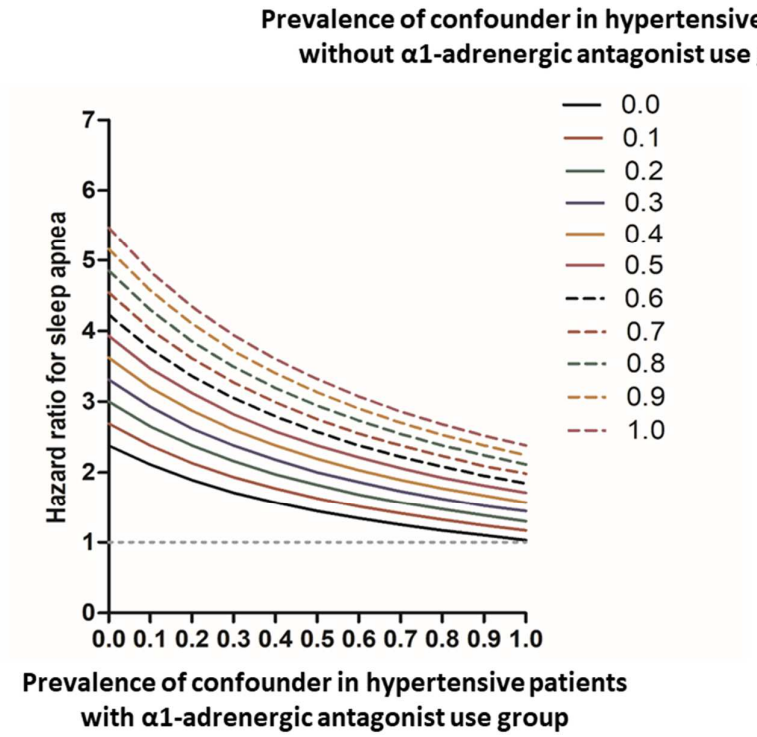

Figure S1.

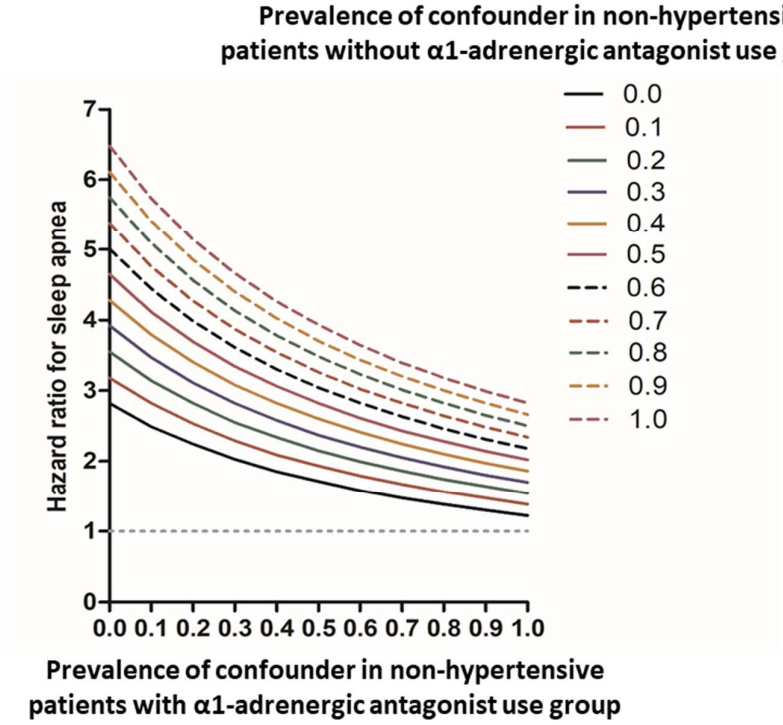

Figure S2.

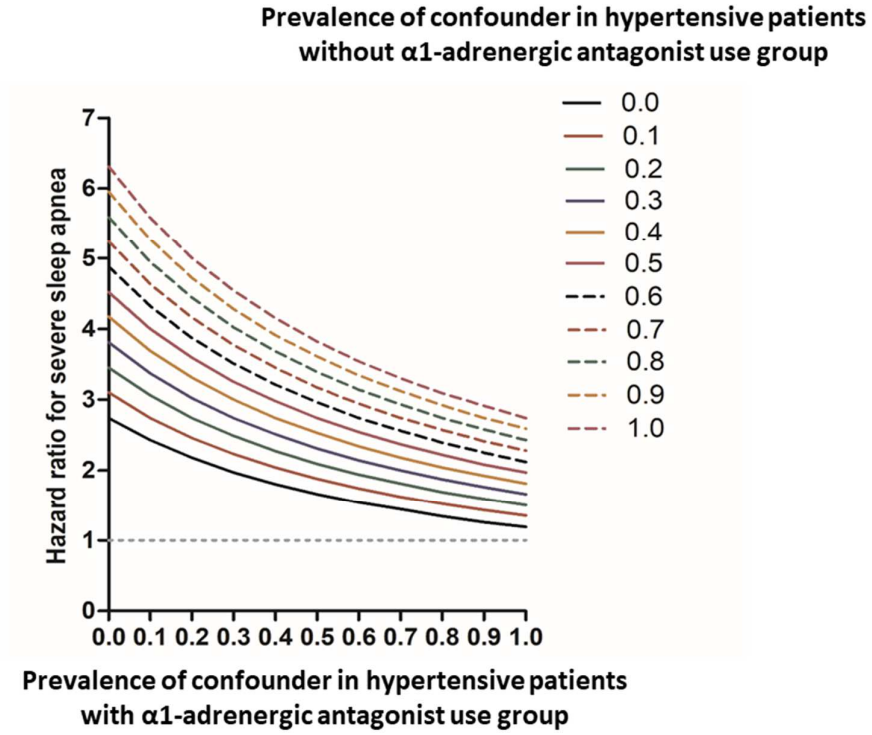

Figure S3.

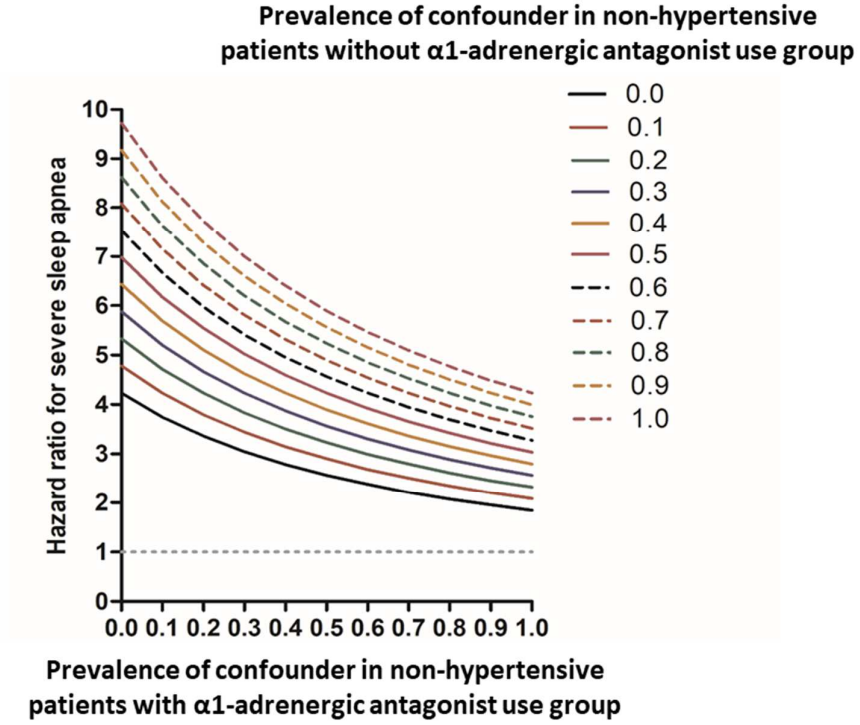

Figure S4.