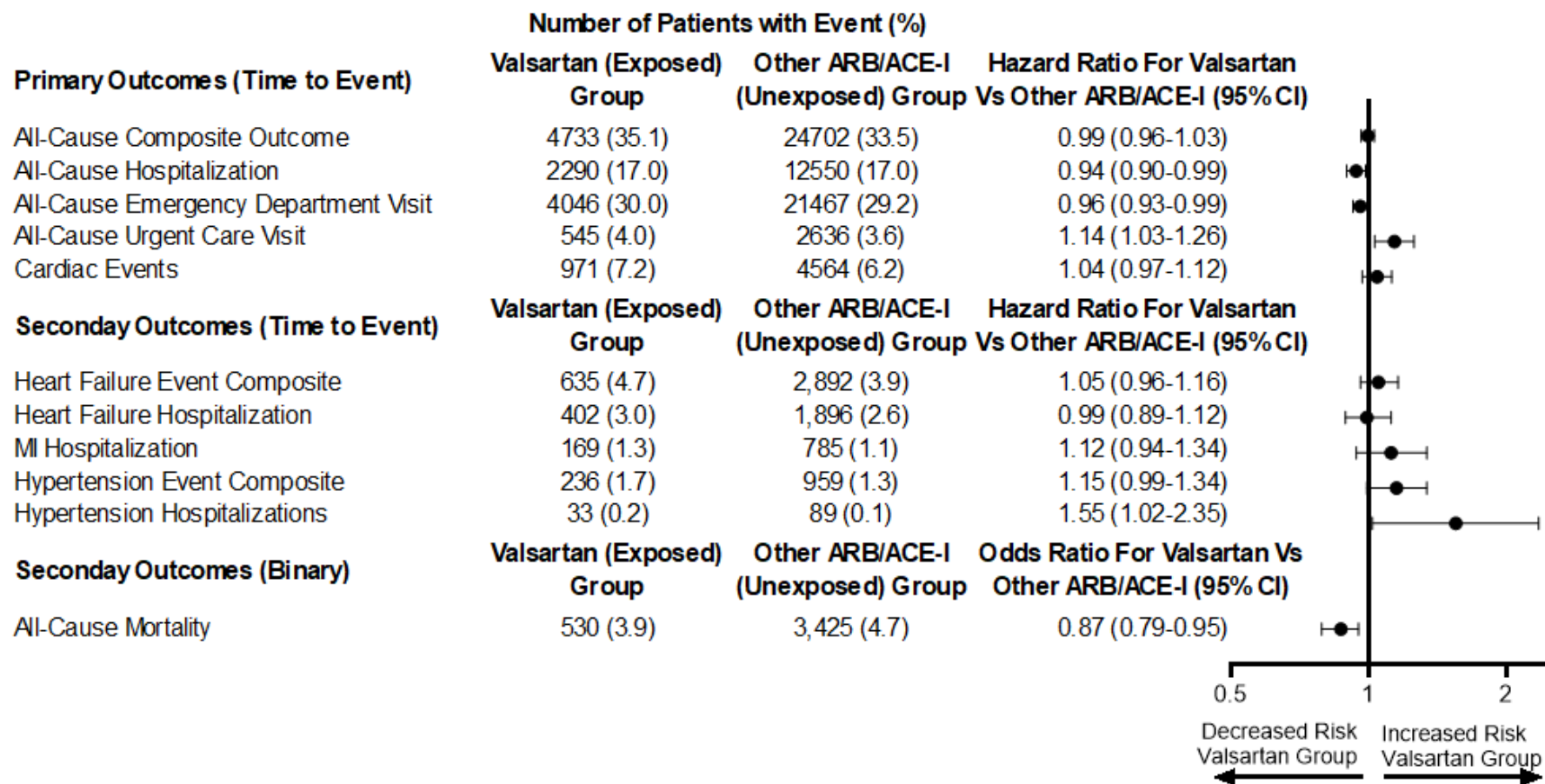**Figure 3.** Associations between exposure to a valsartan drug recall and primary outcomes (all-cause hospitalization, emergency department and urgent care visits, cardiac events) and secondary outcomes (disease-specific clinical outcomes and all-cause mortality) in a multivariable propensity-score weighted analysis.

	Number of Patients with Event (%)		
Primary Outcomes (Time to Event)	Valsartan (Exposed) Group	Other ARB/ACE-I (Unexposed) Group	Hazard Ratio For Valsartan Vs Other ARB/ACE-I (95% CI)
All-Cause Composite Outcome	4733 (35.1)	24702 (33.5)	0.99 (0.96-1.03)
All-Cause Hospitalization	2290 (17.0)	12550 (17.0)	0.94 (0.90-0.99)
All-Cause Emergency Department Visit	4046 (30.0)	21467 (29.2)	0.96 (0.93-0.99)
All-Cause Urgent Care Visit	545 (4.0)	2636 (3.6)	1.14 (1.03-1.26)
Cardiac Events	971 (7.2)	4564 (6.2)	1.04 (0.97-1.12)
Seconday Outcomes (Time to Event)	Valsartan (Exposed) Group	Other ARB/ACE-I (Unexposed) Group	Hazard Ratio For Valsartan Vs Other ARB/ACE-I (95% CI)
Heart Failure Event Composite	635 (4.7)	2,892 (3.9)	1.05 (0.96-1.16)
Heart Failure Hospitalization	402 (3.0)	1,896 (2.6)	0.99 (0.89-1.12)
MI Hospitalization	169 (1.3)	785 (1.1)	1.12 (0.94-1.34)
Hypertension Event Composite	236 (1.7)	959 (1.3)	1.15 (0.99-1.34)
Hypertension Hospitalizations	33 (0.2)	89 (0.1)	1.55 (1.02-2.35)
Seconday Outcomes (Binary)	Valsartan (Exposed) Group	Other ARB/ACE-I (Unexposed) Group	Odds Ratio For Valsartan Vs Other ARB/ACE-I (95% CI)
All-Cause Mortality	530 (3.9)	3,425 (4.7)	0.87 (0.79-0.95)

0.5   1   2

Decreased Risk Valsartan Group   Increased Risk Valsartan Group

Note. For primary outcomes, hazard ratios were obtained from Cox proportional hazards model with inverse probability weighting (IPTW). The all-cause composite outcome combines any hospitalization, emergency department or urgent care use. Cardiac events includes hospitalization for myocardial infarction and hospitalization, emergency department, or urgent care visits for stroke, transient ischemic attack (TIA), heart failure, or hypertension as the principal diagnosis. For secondary outcomes, hazard ratio (HR) were similarly obtained from the multivariable Cox proportional hazards model with inverse probability weighting (IPTW) by the propensity score. For all-cause mortality, odds ratio (OR) were derived from the multivariable logistic regression model with IPTW by the propensity score. All outcomes were defined in the 6 months after the index date. Patients were censored at the first event for composite endpoints.

Abbreviations: Hazard Ratio (HR), Confidence Interval (CI), Emergency Department (ED), Urgent Care (UC), Myocardial Infarction (MI), Transient Ischemic Attack (TIA).