

Supplementary Table S1: Search strategy

Search terms	Studies yielded
Pubmed (accessed 9/2023) ("obstructive sleep apnea" OR "OSA" OR "continuous positive airway pressure" OR "CPAP") AND ("atrial fibrillation ablation" OR "ablation" OR "pulmonary vein ablation" OR "PVI")	432
Embase (accessed 9/2023) (("obstructive sleep apnea" OR "OSA" OR "continuous positive airway pressure" OR "CPAP") AND ("atrial fibrillation ablation" OR "ablation" OR "pulmonary vein ablation" OR "PVI")){including related terms} AND (full text AND human AND English language))	1462

Supplementary Table S2: the Newcastle-Ottawa Scale (NOS) for quality assessment

First author, year	Selection				Comparability (Confounding)	Outcome			Total score
	Representativeness	Selection of the non-exposed cohort	Ascertainment	Endpoint not present at start		Assessment of outcome	Follow-up duration	Adequacy follow-up	
Fein 2013		*	*	*	**	*	*	*	8
Hunt 2022	*	*	*	*	**	*	*	*	9
Jongnara ngsin 2008		*	*	*	**	*	*	*	8
Naruse 2013	*	*	*	*	**	*	*	*	9
Neilan 2013	*	*		*	**		*	*	7
Patel 2010	*	*		*	**	*	*	*	8
Suzuki 2021	*	*	*	*	**		*		7
Zhou 2022	*	*	*	*	**	*	*		8

Notes: The Newcastle-Ottawa scale uses a star system (0 to 9) to evaluate included studies on 3 domains: selection, comparability, and outcomes. Star (*)= item presents. Maximum 1 star (*) for selection and outcome components and 2 stars (**) for comparability components. Higher scores represent higher study quality.

Supplementary Table S3: Sensitivity analysis for AF recurrence after PVI.
Pooled odd ratio (OR) of mortality outcome after each study being excluded.

Study being excluded	Pooled OR (95% CI)	I²
Fein 2013	0.38 (0.25-0.57)	60%
Hunt 2022	0.32 (0.23-0.44)	37%
Jongnarangsin 2008	0.36 (0.24-0.54)	61%
Naruse 2013	0.36 (0.24-0.55)	61%
Neilan 2013	0.4 (0.27-0.6)	45%
Patel 2010	0.36 (0.22-0.57)	56%
Suzuki 2021	0.34 (0.23-0.5)	56%
Zhou 2022	0.4 (0.27-0.58)	51%