

**Figure S1** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Flowchart.

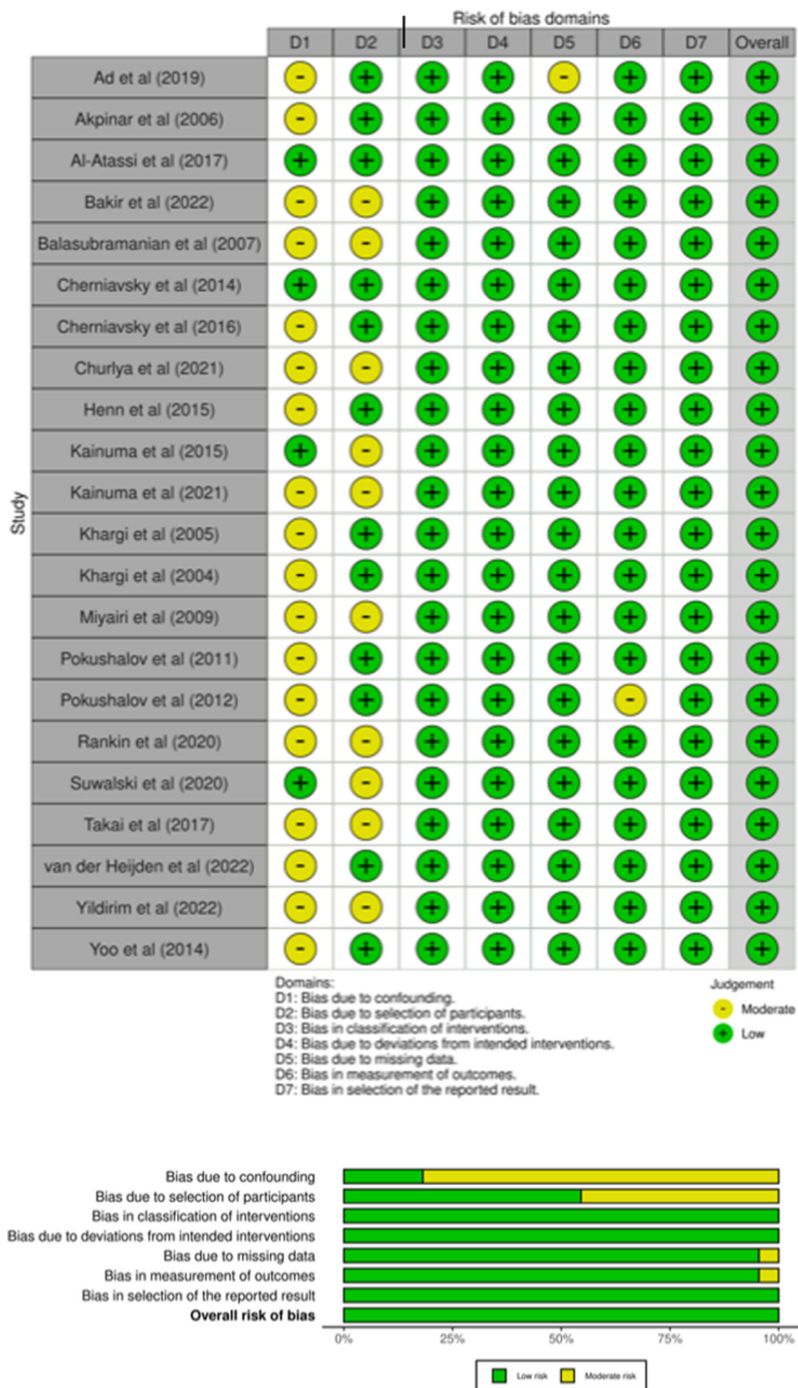
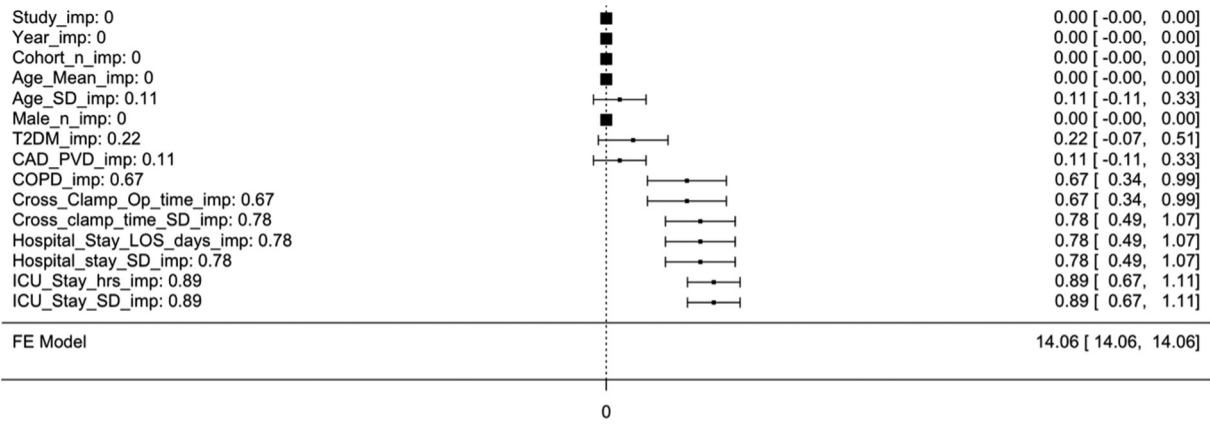
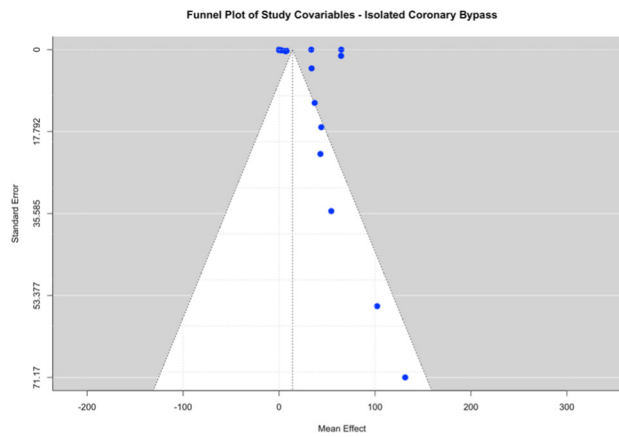


Figure S2 Risk of bias assessment (ROBINS-I Tool).



**Figure S3** Forest plot for isolated coronary bypass cohort.



**Figure S4** Funnel plot of study covariables—isolated coronary bypass.

**Table S1** Detailed study characteristic

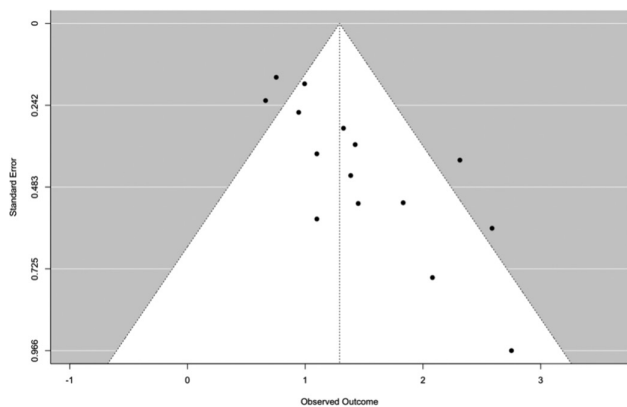
Primary author	Study period	Country	Study design	Energy source/op	Total patients	Mean follow-up	Follow-up interval	Monitoring
Ad (2019)	2005–2016	USA	PCS	CM + NMV	238	–	12-monthly (5 years)	ECG
Akpinar (2006)	2003–2004	Turkey	PCS	PVI + CABG	21	–	6 months (1 year)	ECG + Holter + Echo
Al-Atassi (2017)	2009–2013	USA	RCS	CAG/AVR/CM-PVI	129	30 months (median)	30 days–1 year	ECG
Bakir (2022)	2005–2019	USA	RCS	CM + Myectomy	42	2.2 years	3-monthly, 1 year	Holter, ILR
Balasubramanian (2007)	2004–2005	UK	PCS	CM + CABG	16	–	1-3-6 months	ECG
Cherniavsky (14/16)	2008–2011	Russia	PCS	CABG + PVI/MM	61	14.4 months ( $\pm 9.7$ )	3-6-12-24 months	ILR
Churlya (2021)	2014–2017	USA	RCS	CM + AVR	3692	–	–	–
Henn (2015)	2002–2014	USA	RCS	CM + AVR	75	3.0 years ( $\pm 2.5$ )	3-6-12-24 months	ECG + Holter
Kainuma (2015)	–	Japan	RCS	PVI + AVR/CABG	160	47 months ( $\pm 25$ )	6 monthly	ECG + Holter + Echo
Kainuma (2021)	–	Japan	RCS	PVICM + AVR/CAG	125	63 months ( $\pm 34$ )	6 monthly	ECG + Holter
Khargi (2005)	1997–2003	Germany	PCS	CM/AVR + CABG	63	21 months	3-6-12-annually	Holter
Khargi (2004)	1998–2003	Germany	PCS	CM + CABG	36	25.3 months	3-6-12 months	ECG
Miyairi (2009)	2004–2008	USA	PCS	CM + NMV	19	21.4 $\pm$ 9.5 months	1-3-6-12 months	ECG
Pokushalov (2011)	2008–2009	Russia	PCS	PVI + CABG	72	–	1-3-6-12-annually	ILR
Pokushalov (2012)	2008–2009	Russia	PCS	PVI + CABG	18	–	3 monthly (18 m)	ILR
Rankin (2020)	2013	USA	RCS	CM + CABG	626	2 years	–	–
Suwalski (2020)	2006–2018	Poland	RCS	CM + CABG	346	4.7 years ( $\pm 3.5$ )	–	–
Takai (2017)	2008–2012	Japan	RCS	PVI/CM + NMV	3402	–	–	–
Van Heijden (2022)	2017–2021	Netherlands	RCS	PVI + CABG	23	–	–	Holter + ECG
Yidirim (2022)	2003–2016	Germany	RCS	PVICM-CABG/AVR	268	–	3 months, 12 months	ILR + Holter
Yoo (2014)	2000–2011	South Korea	RCS	CM + AVR	50	18.1 months (median)	3-monthly, yearly (2)	ECG

PCS, prospective cohort study; CM, Cox-Maze; NMV, non-mitral valve; PVI, pulmonary vein isolation; CABG/CAG, coronary artery bypass grafting; RCS, retrospective cohort study; RCT, randomised control trial; AF, atrial fibrillation; ECG, electrocardiogram; AVR, aortic valve replacement; ILR, implantable loop recorder; RFA, radiofrequency ablation; MM, Mini-Maze.

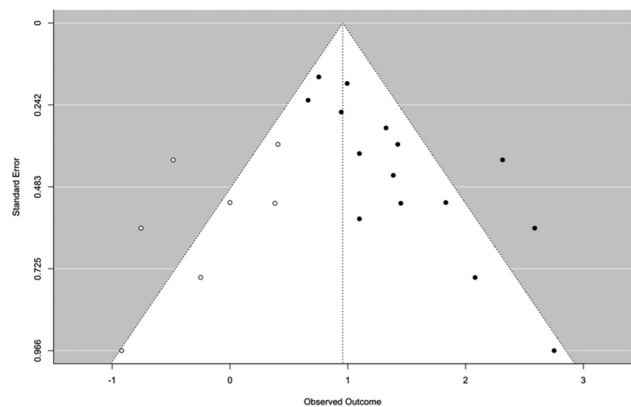
**Table S2** Detailed demographics

Primary Author	Cohort N	Males	Age $\pm$ SD (years)	Paroxysmal AF (%)	Persistent AF (%)	Length of AF (year)	LVEF $\pm$ SD (%)	LA D $\pm$ SD (mm)
Ad (2019)	238	182	67 $\pm$ 10.1	15	85	2.1 (0.3–5.2)		48 $\pm$ 8
Akpinar (2006)	21	14	69.3 $\pm$ 6.3	0	100	–	40.8 $\pm$ 10.9	49 $\pm$ 2.5
Al-Atassi (2017)	129	103	72 $\pm$ 0.8	46	54	–	49 $\pm$ 1.6	46 $\pm$ 1
Bakir (2022)	42	29	57 $\pm$ 12	69	31	2.5 (0.9–5.8)	69 $\pm$ 8	52 $\pm$ 8
Balasubramanian (2007)	16	14	70.6 $\pm$ 8.4	31.25	68.75	–	35.6 $\pm$ 8.7	51 $\pm$ 7
Cherniavsky (14/16)	61	49	–	6	94	–	–	–
Churlya (2021)	3,692	2,454	71.5 $\pm$ 8.9	–	–	–	55.6 $\pm$ 11.9	–
Henn (2015)	75	50	70.5 $\pm$ 8.2	60	40	7 $\pm$ 9.4	55 $\pm$ 13	49 $\pm$ 8
Kainuma (2015)	160	100	70 $\pm$ 9	100	0	–	59 $\pm$ 13	44 $\pm$ 7
Kainuma (2021)	125	89	–	0	100	–	–	–
Khargi (2005)	63	–	69.3 $\pm$ 8.2	–	–	5.66 $\pm$ 6.225	56 $\pm$ 14	45.9 $\pm$ 7.4
Khargi (2004)	36	–	68.7 $\pm$ 8	–	–	5.61 $\pm$ 6.12	53.9 $\pm$ 14	44.9 $\pm$ 6.7
Miyairi (2009)	19	14	63.3 $\pm$ 6.0	–	–	–	–	–
Pokushalov (2011)	72	58	61.6 $\pm$ 4.7	100	0	5.4 $\pm$ 4.2	58.4 $\pm$ 5.2	44.5 $\pm$ 4.7
Pokushalov (2012)	18	14	59 $\pm$ 6	100	0	–	59 $\pm$ 4	45 $\pm$ 5
Rankin (2020)	626	480	–	0	100	–	–	–
Suwalski (2020)	346	286	62 (61–72)	–	–	–	50 (IQR 41–58)	–
Takai (2017)	3,402	2,205	–	–	–	–	–	–
Van der Hei (2022)	23	18	69 $\pm$ 8	61	39	4.9 $\pm$ 6.5	57 $\pm$ 7	39 $\pm$ 5
Yidirim (2022)	268	166	–	100	0	–	–	–
Yoo (2014)	50	31	66.8 $\pm$ 9.5	44	56	–	50.4 $\pm$ 11.6	51.3 $\pm$ 6.1

AF, atrial fibrillation; LVEF, left ventricular ejection fraction; LA, left atrial; SD, standard deviation.



**Figure S5** Funnel plot of freedom from AF small study bias. AF, atrial fibrillation.



**Figure S6** Funnel plot of freedom from AF small study bias with trim and fill. AF, atrial fibrillation.