Supplemental Material

Data S1.

Used search terms:

(Mesh exp "Atrial Fibrillation" and key words "atrial fibrillation", "atrial fibrillations", "paroxysmal atrial fibrillation", "paroxysmal atrial fibrillations", "persistent atrial fibrillation", "persistent atrial fibrillations" or "long-standing persistent atrial fibrillation"), (Mesh exp "Catheter Ablation", and key words "catheter ablation", "transvenous catheter ablation", "radiofrequency ablation", "radio-frequency ablation", "ablation", "circumferential pulmonary vein isolation", or "pulmonary vein isolation"), "(Mesh exp "Non-inducibility", "Inducibility" and key words "non-inducibility", "noninducibility", "non inducibility", "not inducible", "inducibility", "inducible", "induction", or "induce"), and (Mesh exp "Recurrence", "Prognosis" and key words "recurrence", "recurrences", "freedom from AF", "freedom from arrhythmia", "freedom from arrhythmias", "prognosis", "prognostic factor", "prognostic factors", "prognostic significance", "clinical value", "outcome", "outcomes", "clinical outcomes", "arrhythmias-free outcome" or "arrhythmia-free outcome").

Table S1. Quality assessment according to the Newcastle-Ottawa scale for nonrandomized studies.

Studies	Selection	Comparability	Outcome	Total score
Kawai-2019[10]	****	*	***	8
Skala-2019[13]	****	**	***	9
Otsuka-2018[8]	****	*	***	8
Santangeli-2018[12]	****	*	***	8
Leong-Sit-2013[11]	****	*	***	8
Adlbrecht-2013[21]	****	*	***	8
Liu-2012[7]	****	*	***	8
Satomi-2008[14]	****	*	***	8
Chang-2007[5]	****		***	7
Richter -2006[22]	****	**	***	9
Haïssaguerre-2004[6]	****		***	7
Oral-2004[4]	****	**	***	9

Average score: 8.08

Table S2. GRADE rating of the quality of evidence.

Author(s):

Question: AF non-inducibility compared to AF inducibility

Setting:

Bibliography:

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)		

AF recurrence rate (follow up: range 5 months to 42.5 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
12	observational studies	not serious	not serious	not serious	not serious	strong association	400/1612 (24.8%)	373/1160 (32.2%)	RR 0.68 (0.60 to 0.77)	103 fewer per 1,000 (from 129 fewer to 74 fewer)	⊕⊕⊕◯ MODERATE	

PAF associated with AF recurrence rate (follow up: range 5 months to 42.5 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
10	observational studies	not serious	not serious	not serious	not serious	strong association	297/1344 (22.1%)	257/910 (28.2%)	RR 0.64 (0.55 to 0.75)	102 fewer per 1,000 (from 127 fewer to 71 fewer)	⊕⊕⊕◯ MODERATE	

Non-AF associated with AF recurrence (follow up: range 5 months to 42.5 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
4	observational studies	not serious	not serious	not serious	not serious	none	76/213 (35.7%)	72/161 (44.7%)	RR 0.75 (0.59 to 0.96)	112 fewer per 1,000 (from 183 fewer to 18 fewer)	⊕⊕◯◯ LOW	

Follow up less than 6 months associated with AF recurrence rate (follow up: mean 5 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
2	observational studies	not serious	not serious	not serious	not serious	none	51/108 (47.2%)	58/226 (25.7%)	RR 0.55 (0.41 to 0.74)	115 fewer per 1,000 (from 151 fewer to 67 fewer)	⊕⊕◯◯ LOW	

Follow up between 6 months to 12 months associated with AF recurrence (follow up: range 6 months to 12 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
8	observational studies	not serious	not serious	not serious	not serious	strong association	296/956 (31.0%)	235/1041 (22.6%)	RR 0.67 (0.58 to 0.77)	74 fewer per 1,000 (from 95 fewer to 52 fewer)	⊕⊕⊕◯ MODERATE	

Follow up longer than 12 months associated with AF recurrence rate (follow up: range 12 months to 42.5 months)

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)		
4	observational studies	not serious	not serious	not serious	not serious	none	91/226 (40.3%)	169/551 (30.7%)	RR 0.73 (0.60 to 0.89)	83 fewer per 1,000 (from 123 fewer to 34 fewer)	⊕⊕◯◯ LOW	

Cut-off time 1 minute associated with AF recurrence rate (follow up: range 6 months to 12 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
5	observational studies	not serious	not serious	not serious	not serious	strong association	100/179 (55.9%)	126/434 (29.0%)	RR 0.54 (0.45 to 0.66)	134 fewer per 1,000 (from 160 fewer to 99 fewer)	⊕⊕⊕◯ MODERATE	

Cut-off time 2 minutes associated with AF recurrence rate (follow up: range 12 months to 19 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
2	observational studies	not serious	not serious	not serious	not serious	none	81/207 (39.1%)	72/242 (29.8%)	RR 0.86 (0.67 to 1.11)	42 fewer per 1,000 (from 98 fewer to 33 more)	⊕⊕◯◯ LOW	

Cut-off time 5-10 minutes associated with AF recurrence rate (follow up: range 12 months to 42.5 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
4	observational studies	not serious	not serious	not serious	not serious	none	50/133 (37.6%)	128/436 (29.4%)	RR 0.77 (0.58 to 1.01)	68 fewer per 1,000 (from 123 fewer to 3 more)	⊕⊕◯◯ LOW	

Mild stimulation associated with AF recurrence rate (follow up: range 12 months to 19 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
2	observational studies	not serious	not serious	not serious	not serious	none	81/207 (39.1%)	72/242 (29.8%)	RR 0.86 (0.67 to 1.11)	42 fewer per 1,000 (from 98 fewer to 33 more)	⊕⊕◯◯ LOW	

Moderate stimulation associated with AF recurrence rate (follow up: range 12 months to 42.5 months)

№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)	Certainty	Importance
6	observational studies	not serious	not serious	not serious	not serious	none	127/254 (50.0%)	212/680 (31.2%)	RR 0.63 (0.53 to 0.74)	115 fewer per 1,000 (from 147 fewer to 81 fewer)	⊕⊕◯◯ LOW	

Severe stimulation associated with AF recurrence rate (follow up: range 6 months to 16 months)

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	AF non-inducibility	AF inducibility	Relative (95% CI)	Absolute (95% CI)		
3	observational studies	not serious	not serious	not serious	not serious	none	23/58 (39.7%)	42/190 (22.1%)	**RR 0.57** (0.38 to 0.86)	**95 fewer per 1,000** (from 137 fewer to 31 fewer)	⊕⊕◯ ◯ LOW	

CI: Confidence interval; **RR:** Risk ratio

Figure S1. **Sensitivity of the outcome (recurrence of AF).**

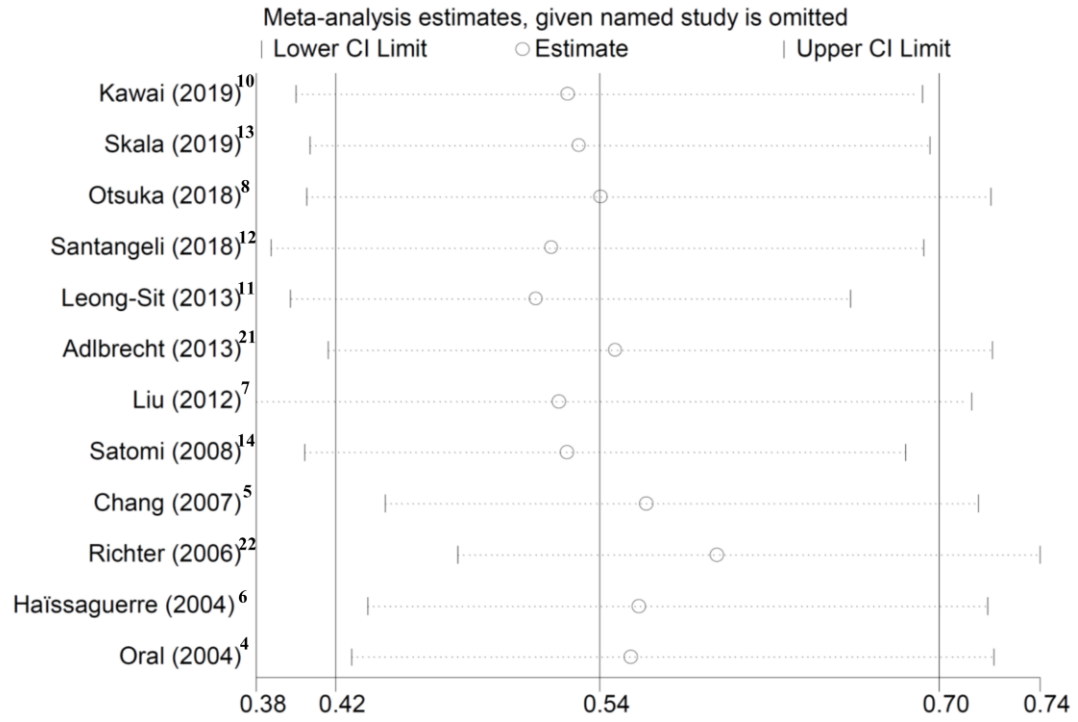Meta-analysis estimates, given named study is omitted

Figure S2. (random effects models) AF non-inducibility vs AF inducibility by burst pacing after catheter ablation on the recurrence of AF in total patients.
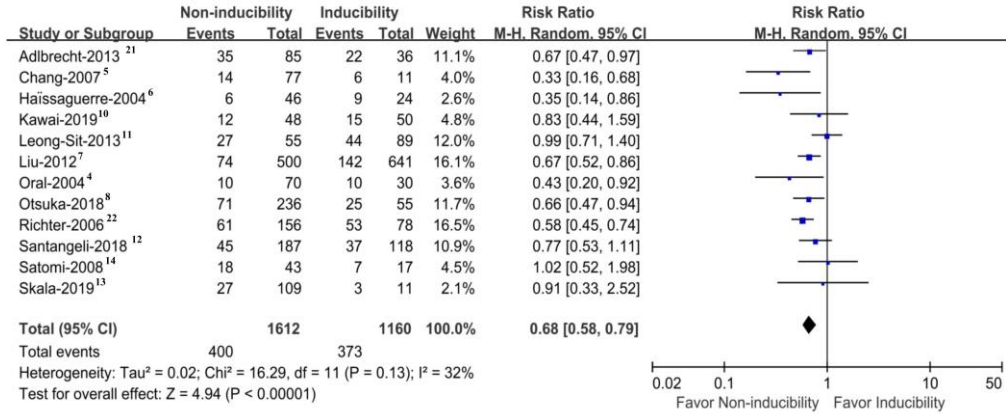
Study or Subgroup	Non-inducibility Events	Total	Inducibility Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Adlbrecht-2013 [21]	35	85	22	36	11.1%	0.67 [0.47, 0.97]
Chang-2007 [5]	14	77	6	11	4.0%	0.33 [0.16, 0.68]
Haïssaguerre-2004 [6]	6	46	9	24	2.6%	0.35 [0.14, 0.86]
Kawai-2019 [10]	12	48	15	50	4.8%	0.83 [0.44, 1.59]
Leong-Sit-2013 [11]	27	55	44	89	12.0%	0.99 [0.71, 1.40]
Liu-2012 [7]	74	500	142	641	16.1%	0.67 [0.52, 0.86]
Oral-2004 [4]	10	70	10	30	3.6%	0.43 [0.20, 0.92]
Otsuka-2018 [8]	71	236	25	55	11.7%	0.66 [0.47, 0.94]
Richter-2006 [22]	61	156	53	78	16.5%	0.58 [0.45, 0.74]
Santangeli-2018 [12]	45	187	37	118	10.9%	0.77 [0.53, 1.11]
Satomi-2008 [14]	18	43	7	17	4.5%	1.02 [0.52, 1.98]
Skala-2019 [13]	27	109	3	11	2.1%	0.91 [0.33, 2.52]
Total (95% CI)		1612		1160	100.0%	0.68 [0.58, 0.79]
Total events	400		373			

Heterogeneity: Tau² = 0.02; Chi² = 16.29, df = 11 (P = 0.13); I² = 32%
Test for overall effect: Z = 4.94 (P < 0.00001)

Risk Ratio M-H, Random, 95% CI

0.02 0.1 1 10 50
Favor Non-inducibility Favor Inducibility

Figure S3. (random effects models) AF non-inducibility vs AF inducibility by burst pacing after catheter ablation on the recurrence of AF in different AF type and follow-up time.
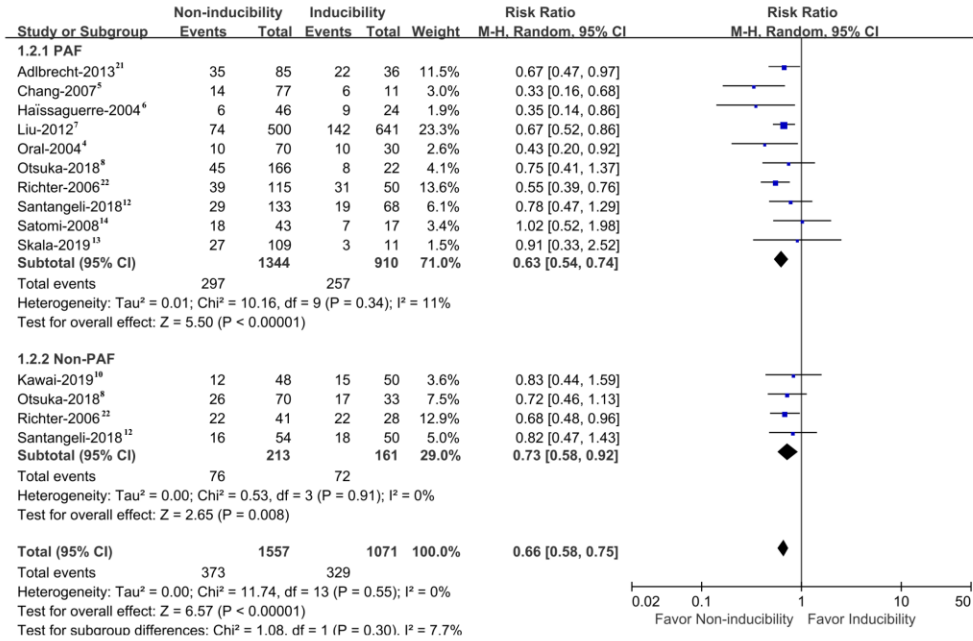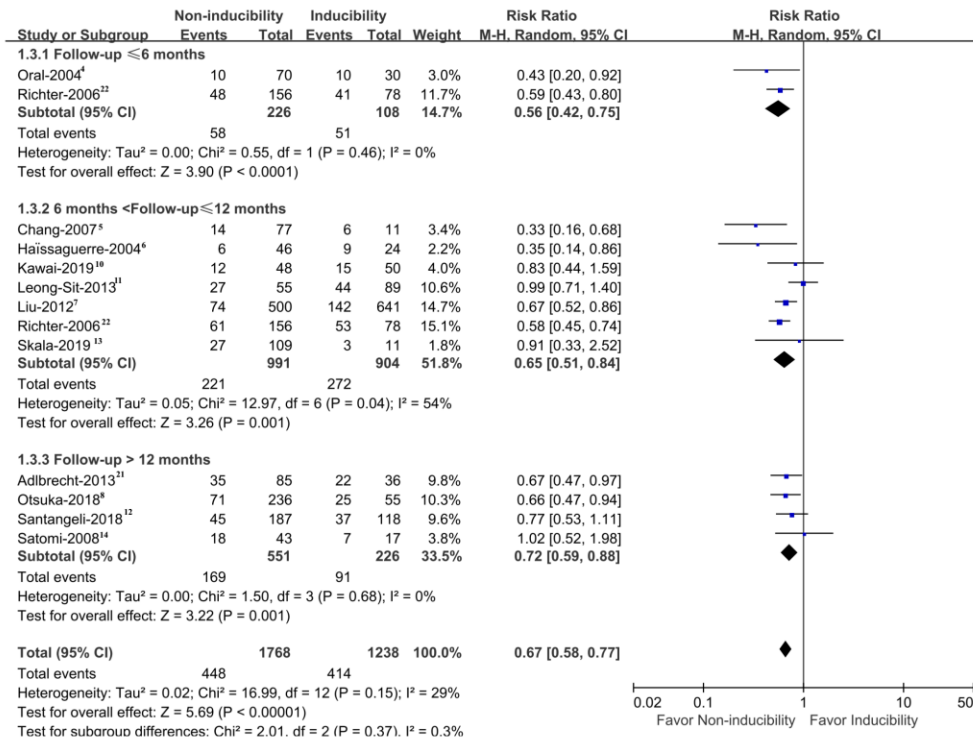
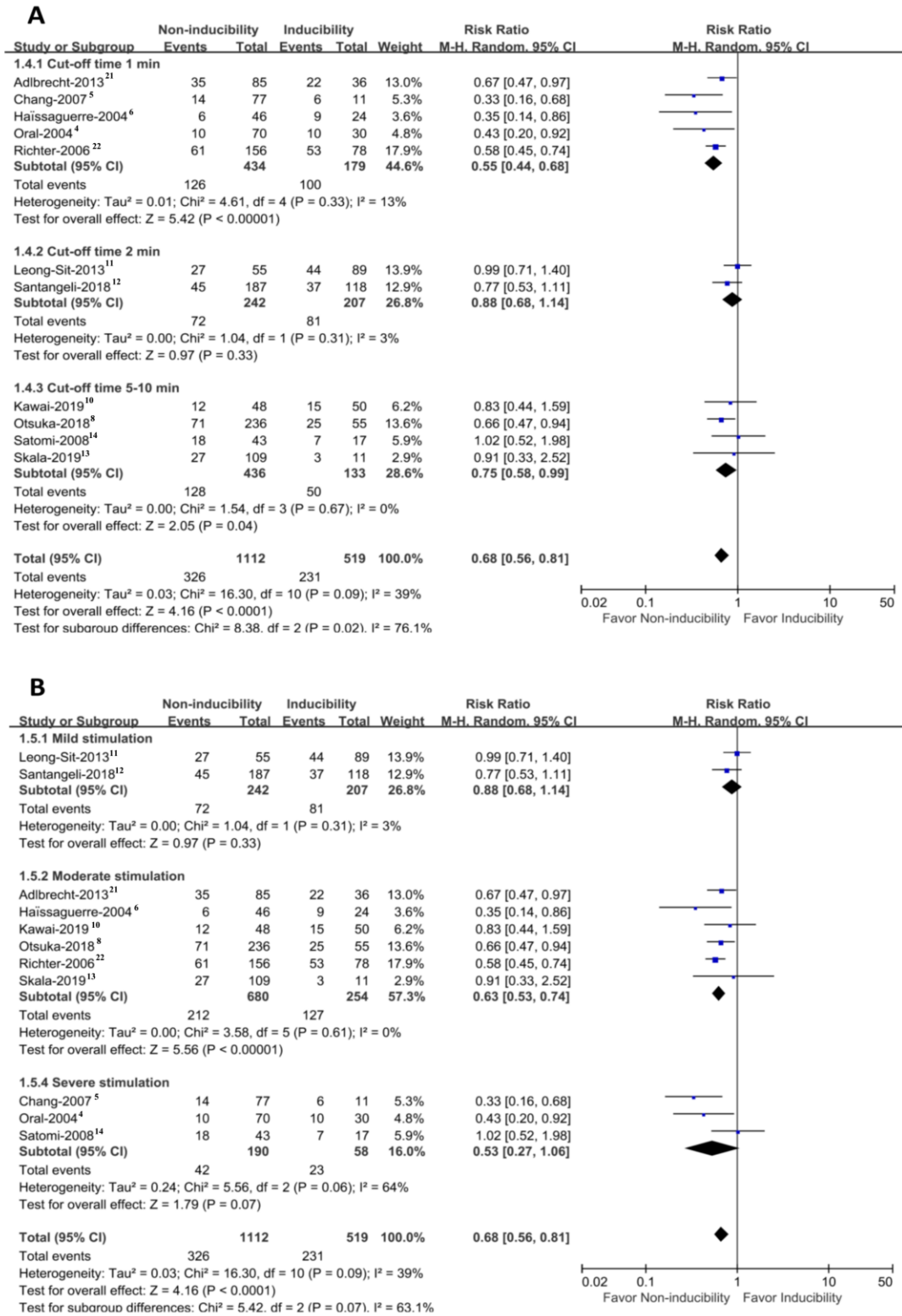PAF: paroxysmal AF; Non-PAF: non-paroxysmal AF.

Figure S4. (random effects models) AF non-inducibility vs AF inducibility by burst pacing after catheter ablation on the recurrence of AF in different induction protocols.

Mild stimulation: burst pacing to refractoriness, 2:1 atrial captlure, or 180-200 ms (maintaining ≤3 sec/15 beats); Moderate stimulation: burst pacing to refractoriness, or 180-200 ms (maintaining 5 sec/30 beats); Severe stimulation: burst pacing to refractoriness (maintaining ≥10 sec), or 150 ms (maintaining 5-10 sec).