# Supplementary online content



This supplementary material has been provided by the authors to give readers additional information about their work.

**Supplementary S1 - Differences between registered protocol and final manuscript**

We could not analyze the following secondary outcomes due to a lack of study-level subgroup data:

- Bleeding
  - No events in three of the four randomized trials that reported bleeding
- Hospital readmission
  - Only one trial evaluating this outcome.
- New or worsening heart failure
  - Only one trial evaluating this outcome.
- Days out of hospital
  - No trials evaluating this outcome.
- Quality of life
  - No trials evaluating this outcome.

We were not able to conduct planned subgroup analyses for the following groups due to a lack of study-level subgroup data:

- High and moderate vs low risk of bias studies
- Isolated CABG vs all other surgeries

**Supplementary S2 - Search strategy**

**CENTRAL**
Date run: 18/03/2023 17:3
Inception to March 2023

| ID | Search | Hits |
|---|---|---|
| #1 | cardiac surg* or cardiac surgeon or heart surgery | 44766 |
| #2 | cardiovascular surg* or cardiovascular surgery | 18156 |
| #3 | atrial fibrillation or atrial fibrillation | 14666 |
| #4 | afib | 115 |
| #5 | atrial fib* | 14890 |
| #6 | atrial flutter or heart atrium flutter | 1508 |
| #7 | rhythm control | 4814 |
| #8 | anti-arrythmic agent | 2 |
| #9 | cardioversion or cardioversion | 1658 |
| #10 | antiarrythmia or heart arrhythmia | 7693 |
| #11 | amiodarone or Amiodarone | 1738 |
| #12 | sotalol or Sotalol | 685 |
| #13 | flecainide or Flecainide | 429 |
| #14 | propafenone or propafenone | 501 |
| #15 | ibutilide | 95 |
| #16 | dofetilide | 141 |
| #17 | disopyramide | 272 |
| #18 | vernakalant | 47 |
| #19 | dronedarone | 150 |
| #20 | rate control | 120069 |
| #21 | rate* | 440409 |
| #22 | Metoprolol or metoprolol | 3270 |
| #23 | Atenolol or Atenolol | 3354 |
| #24 | Beta block* or beta adrenergic receptor blocking agent | 14107 |
| #25 | Bisoprolol or bisoprolol | 1105 |
| #26 | Adrenergic beta-antag* | 4529 |
| #27 | Carvedilol or carvedilol | 1494 |
| #28 | Timolol or timolol | 2442 |
| #29 | non-dihydropyridine calcium channel blockers | 46 |
| #30 | diltiazem | 1906 |
| #31 | verapamil | 2458 |
| #32 | Cardizem | 34 |
| #33 | gallopamil | 181 |
| #34 | Nebivolol or Nebivolol | 605 |
| #35 | landiolol | 220 |

| | | |
|---|---|---|
| #36 | Acebutolol or Acebutolol | 407 |
| #37 | Digoxin | 1994 |
| #38 | cardiac glycosides | 206 |
| #39 | digitoxin | 101 |
| #40 | Proscillaridin | 11 |
| #41 | Lanoxin | 27 |
| #42 | 1 or 2 | 1485104 |
| #43 | 3 or 4 or 5 or 6 | 1616812 |
| #44 | 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 | 1578945 |
| #45 | 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 | 1906258 |
| #46 | 42 and 43 and 44 and 45 | 6417 |
| #47 | remove duplicates from 46 | 965 |

**OVID Medline**
Database: OVID Medline epub ahead of print, in-process & other non-indexed citations, Ovid Medline (R) daily and Ovid Medline (R) 1946 to March 18, 2023

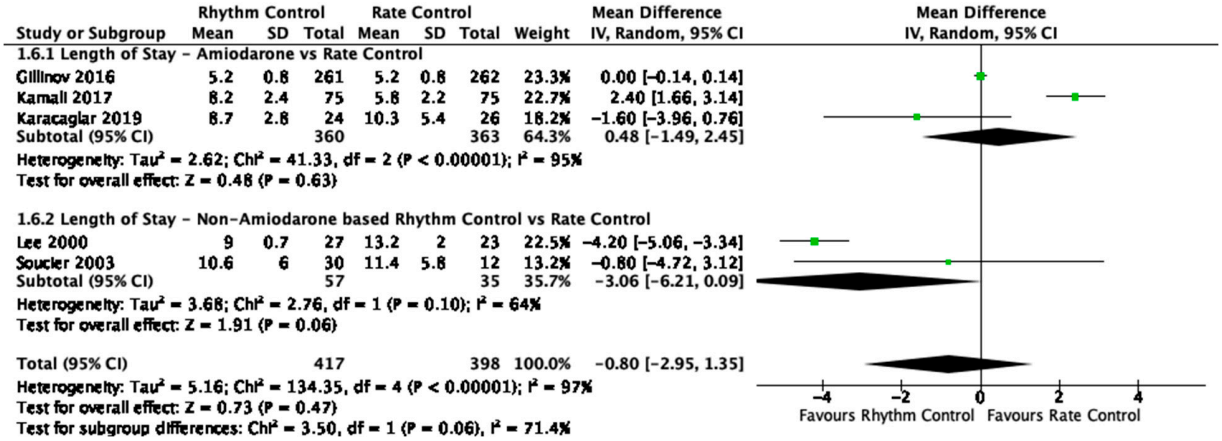
Date run: 18/03/2023 17:3
Inception to March 2023

| ID | Search | Hits |
|---|---|---|
| 1 | Cardiac surg*.mp. or exp heart surgery/ | 97730 |
| 2 | exp cardiovascular surgery/ | 611872 |
| 3 | exp atrial fibrillation/ | 66759 |
| 4 | atrial fibrillation.mp. | 98212 |
| 5 | afib.mp. | 428 |
| 6 | atrial fib*.mp. | 98698 |
| 7 | atrial flutter.mp. | 9178 |
| 8 | exp heart atrium flutter/ | 137442 |
| 9 | exp antiarrhythmic agent/ | 220494 |
| 10 | rhythm control.mp. | 2026 |
| 11 | cardioversion.mp. | 6754 |
| 12 | exp automatic cardioversion/ or exp cardioversion/ | 15641 |
| 13 | heart arrhythmia.mp. or exp heart arrhythmia/ | 129899 |
| 14 | anti-arrhythmia.mp. | 28774 |
| 15 | amiodarone.mp. | 11610 |
| 16 | exp amiodarone/ | 7942 |
| 17 | Sotalol.mp. or exp sotalol/ | 3374 |
| 18 | exp flecainide acetate/ or exp flecainide/ or flecainide.mp. | 2680 |
| 19 | propafenone.mp. or exp propafenone/ | 1908 |
| 20 | exp ibutilide fumarate/ or exp ibutilide/ or ibutilide.mp. | 397 |
| 21 | dofetilide.mp. or exp dofetilide/ | 1052 |
| 22 | exp disopyramide phosphate/ or exp disopyramide/ | 2096 |
| 23 | vernakalant.mp. or exp vernakalant/ | 15674 |
| 24 | exp dronedarone plus ranolazine/ or exp dronedarone/ | 713 |
| 25 | rate control.mp. | 3729 |
| 26 | exp beta adrenergic receptor blocking agent/ or exp metoprolol/ | 86456 |
| 27 | exp atenolol plus chlortalidone/ or exp atenolol/ or exp atenolol plus indapamide/ or exp atenolol plus nifedipine/ | 8504 |
| 28 | Atenolol.mp. | 1943 |
| 29 | Bisoprolol.mp. or exp acetylsalicylic acid plus bisoprolol/ or exp bisoprolol/ or exp bisoprolol fumarate plus hydrochlorothiazide/ or exp bisoprolol fumarate/ | 41576 |
| 30 | Adrenergic beta-antag*.mp. | 3949 |
| 31 | exp carvedilol plus ivabradine/ or exp carvedilol/ | 1675 |
| 32 | exp dorzolamide plus timolol maleate/ or exp hydrochlorothiazide plus timolol maleate/ or exp brimonidine plus timolol/ or exp latanoprost plus | 5309 |

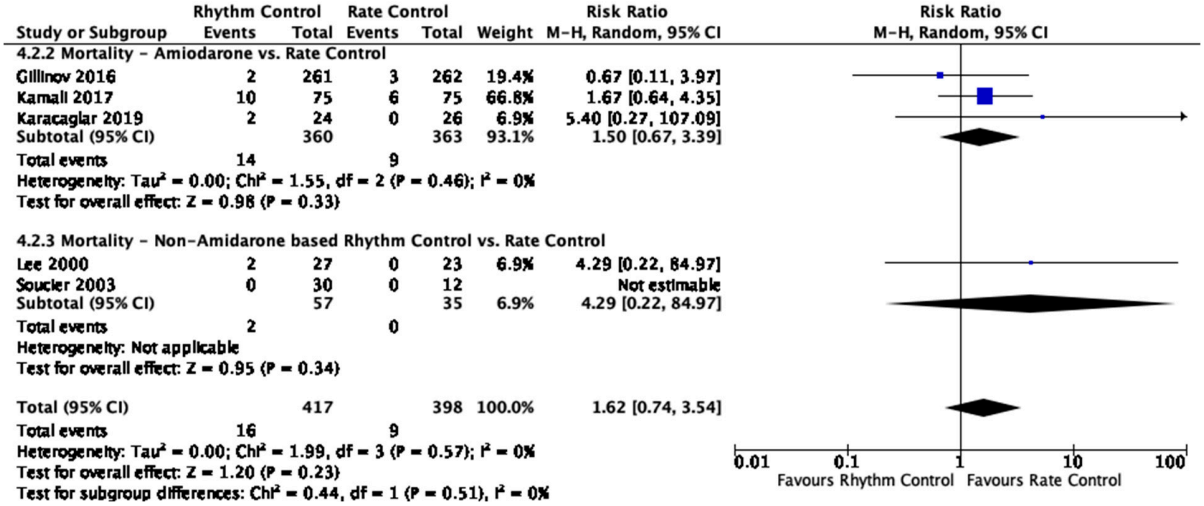
| | | |
|---|---|---|
| | timolol/ or exp timolol plus travoprost/ or exp bimatoprost plus timolol/ or exp bendroflumethiazide plus timolol/ or exp tafluprost plus timolol/ or exp timolol maleate/ or exp brinzolamide plus timolol/ or exp timolol/ or Timolol.mp. or exp pilocarpine plus timolol/ or exp dorzolamide plus timolol/ | |
| 33 | exp verapamil/ or exp calcium channel blocking agent/ or exp diltiazem/ | 53141 |
| 34 | Cardizem.mp. | 6277 |
| 35 | gallopamil.mp. or exp gallopamil/ | 1122 |
| 36 | exp hydrochlorothiazide plus nebivolol/ or exp atenolol/ or exp nebivolol/ or exp carvedilol/ or Nebivolol.mp. or nebivolol plus valsartan/ | 841 |
| 37 | landiolol.mp. or exp landiolol/ | 396 |
| 38 | Acebutolol.mp. or exp acebutolol plus nifedipine/ or exp acebutolol/ | 1147 |
| 39 | exp digoxin/ or Digoxin.mp. | 16876 |
| 40 | cardiac glycosides.mp. or exp cardiac glycoside/ | 44712 |
| 41 | digitoxin.mp. or exp digitoxin/ | 245 |
| 42 | Proscillaridin.mp. or exp proscillaridin/ | 12603 |
| 43 | Lanoxin.mp. or exp digoxin/ | 2971 |
| 44 | 1 or 2 | 644503 |
| 45 | 3 or 4 or 5 or 6 or 7 or 8 | 167378 |
| 46 | 9 or 24 or 23 or 22 or 21 or 20 or 19 or 18 or 17 or 16 or 15 or 14 or 13 or 12 or 11 or 10 | 357651 |
| 47 | 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 | 188660 |
| 48 | 44 and 45 and 46 and 47 | 854 |
| 49 | remove duplicates from 48 | 856 |

**Supplementary S3 - Length of stay and mortality subgroups for randomized trials**

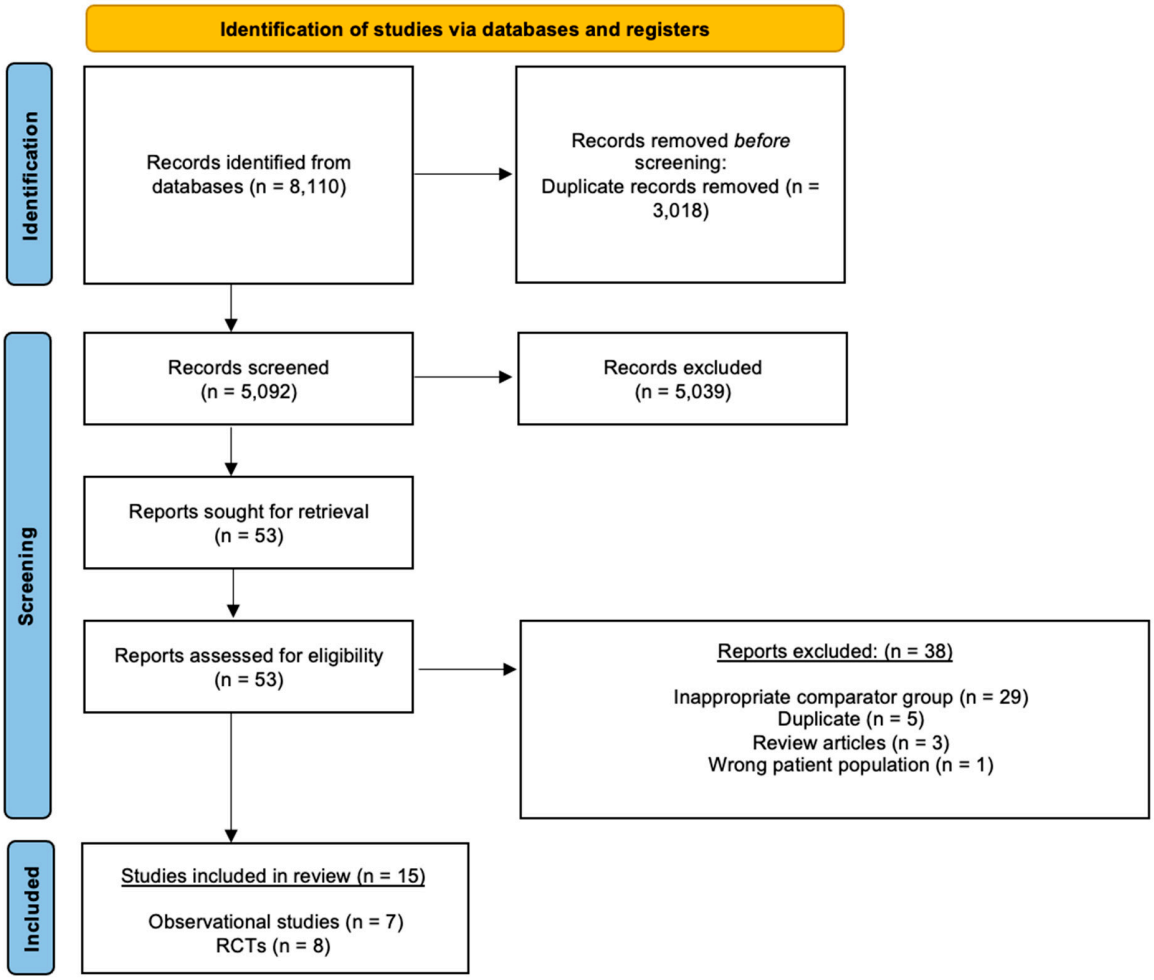
Length of stay subgroups for randomized trials




Mortality subgroups for randomized trials



**Supplementary S4 - Study flow diagram for evidence source and selection**



**Supplementary S5 – Individual randomized trial rhythm monitoring method**

| Study ID | Study rhythm monitoring method |
|---|---|
| Demirkilic 1996 (17) | 24-hour Holter monitoring was done weekly for 1 month and every month thereafter. |
| Gillinov 2016 (18) | ECG or telemetry recording was done the day of discharge, at 30 days and at 60 days. |
| Hjelms 1992 (12) | Unclear how long patients were followed for recurrence after initial conversion to sinus rhythm. |
| Kamali 2017 (13) | Rhythm monitoring not described. |
| Karacaglar 2019 (19) | Rhythm monitoring was done by 24-hour telemetry monitoring and confirmed with 12-lead electrocardiography during hospital follow-up. On the 30th day, a 12-lead ECG and 48 hours of Holter monitoring were performed. |
| Lee 2000 (14) | Continuous 3-lead electrocardiographic telemetry was performed until hospital discharge. After initial conversion, telemetry readouts were screened daily. An episode was considered significant if it lasted for >5 minutes. Daily 12-lead electrocardiograms were also obtained.<br>Electrocardiograms were obtained 1 week, 4 weeks, and 6 to 8 weeks after discharge. |
| Soucier 2003 (15) | All patients received telemetry monitoring for at least 24 hours following enrollment in the study. Rhythm changes including conversion to sinus, recurrence of AF, and development of other ventricular or supraventricular tachy or brady arrhythmia were recorded and placed in each patient's chart. Patients were followed until hospital discharge. |
| Wafa 1989 (16) | Patients were under continuous electrocardiographic monitoring throughout the 24-hour study period. On entry into the study, a 12-lead ECG electrocardiogram was taken in every patient and continuous electrocardiographic tape monitoring was started. |

**Supplementary S6 – Characteristics and effect measures from observational studies (tables and forest plots)**

**Characteristics of observational studies**

| Study ID | N | Surgery type | Rhythm control | Rate control | Follow-up duration | Outcomes reported |
|---|---|---|---|---|---|---|
| Abbas 2016 | 93 | Non-CABG: 120/120 (100%) | Amiodarone IV loading dose weight (kg) x 5 (mg) and then maintenance weight (kg) x 15(mg) | Digoxin IV 0.1 mg and 0.9 BSA / 0.1 | 72 hours | AF recurrence (1 week) |
| Bruggmann 2021 | 97 | CABG: 39/97 (40.2%) Non-CABG: 58/97 (59.8%) | Amiodarone* | Choice between*<br><br>-Beta blocker<br>-Non-dihydropyridine calcium channel blocker | 1 month | Length of stay<br>AF recurrence (3 months) |
| Cioffi 2000 | 176 | CABG: 82/176 (46.6%) Non-CABG: 94/176 (53.4%) | Amiodarone 200 mg/day | Choice between*<br><br>-Atenolol<br>-Bisoprolol<br>-Metoprolol | 1 month | Length of stay<br>AF recurrence (1 month) |
| Doulias 2011 | 597 | CABG: 597/597 (100%) | Amiodarone* | Choice between*<br><br>-Digoxin<br>-Beta blocker | 24 hours | AF recurrence (3 months) |
| Guaragna 1997 | 101 | CABG: 67/101 (66.3%) Valve surgery: 35/101 (34.7%) | Amiodarone* | Digoxin* | 48 hours | AF recurrence (1 week) |
| Shah 2001 | 101 | CABG: 101/101 (100%) | Choice between*<br><br>-Sotalol<br>-Propafenone<br>-Procainamide | Choice between*<br><br>-Digoxin<br>-Beta blocker | 1 month | Length of stay<br>AF recurrence (1 week and 1 month)<br>Mortality |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | -Amiodarone<br>-Quinidine | -Non-dihydropyridine calcium channel blocker | | |
| Stebbins 2001 | 263 | CABG: 263 (100%) | Choice between*<br><br>-Class I antiarrhythmic<br>-Class III antiarrhythmic | Choice between*<br><br>-Digoxin<br>-Beta blocker<br>-Non-dihydropyridine calcium channel blocker | 6 weeks | Length of stay<br>AF recurrence (3 months)<br>Mortality |

***:** dose and route on physician preference

**IV:** given intravenously; **AF:** atrial fibrillation; **CABG:** coronary artery bypass graft.

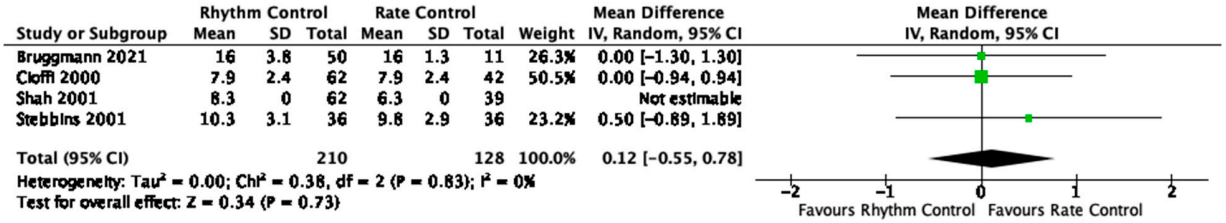
**Effect measures from observational studies**

| Study ID | N | Length of stay (days) | AF recurrence 1 week | AF recurrence 1 month | AF recurrence 3 months | Mortality |
|---|---|---|---|---|---|---|
| Abbas 2016[b] | 93 | NR | 12/29 rhythm control<br>32/64 rate control | NR | NR | NR |
| Bruggmann 2021 | 97 | 16 ± 3.8 for rhythm control<br>16 ± 1.3 for rate control | NR | NR | 49/50 on rhythm control<br>8/11 on rate control[a] | NR |
| Cioffi 2000[b] | 176 | 7.9 ± 2.4 for both rhythm and rate control | NR | 2/22 rhythm<br>4/42 rate | NR | NR |
| Doulias 2011[b] | 597 | NR | NR | NR | 22/88 on rhythm control<br>14/48 on rate control | NR |
| Guaragna 1997[b] | 101 | NR | 6/28 rhythm control<br>21/52 rate control | NR | NR | NR |
| Shah 2001[b] | 101 | 8.3 on rhythm control<br>6.3 on rate control | 8/62 rhythm control<br>5/39 rate control | 5/62 rhythm<br>2/39 rate | NR | 0/62 on rhythm control<br>1/39 on rate control |
| Stebbins 2001 | 263 | 10.3 ± 3.1 on rhythm control<br>9.8 ± 2.9 on rate control | NR | NR | 1/36 on rhythm control<br>1/76 on rate control | 0/36 on rhythm control<br>4/76 on rate control[b] |

**NR:** not reported; **AF:** atrial fibrillation; **N:** number of randomized patients

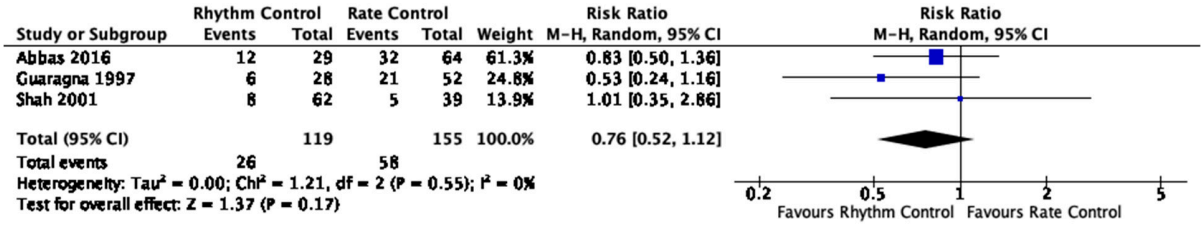
*Explanations*
a. Data for patients on: Rhythm control (n =50), Rate control (n =11), None (n =8), Mixed (n =28)
b. Insufficient information to calculate standard deviation

## Length of stay (days) – observational studies

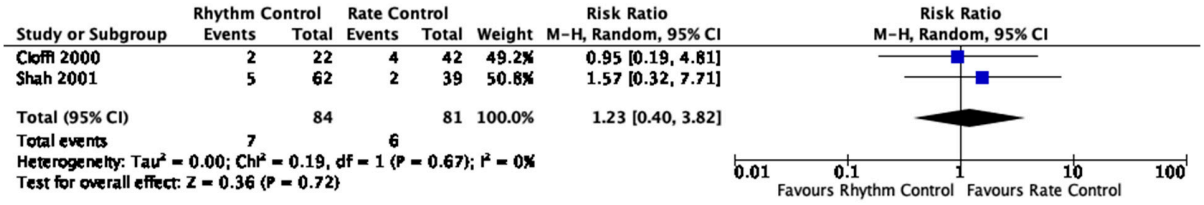



Shah 2001 did not provide information on variance, including no information on minimum, median or max. Consequently, SD was not derived.

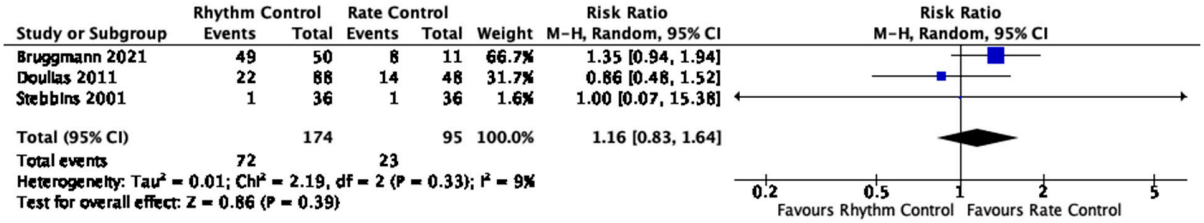
## AF recurrence (within 1 week) – observational studies



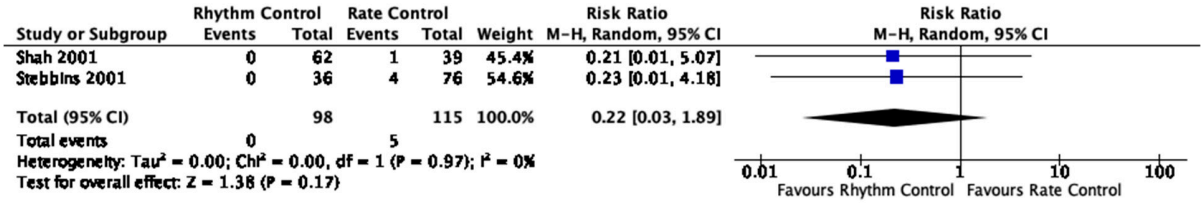

## AF recurrence (up to 1 month) – observational studies



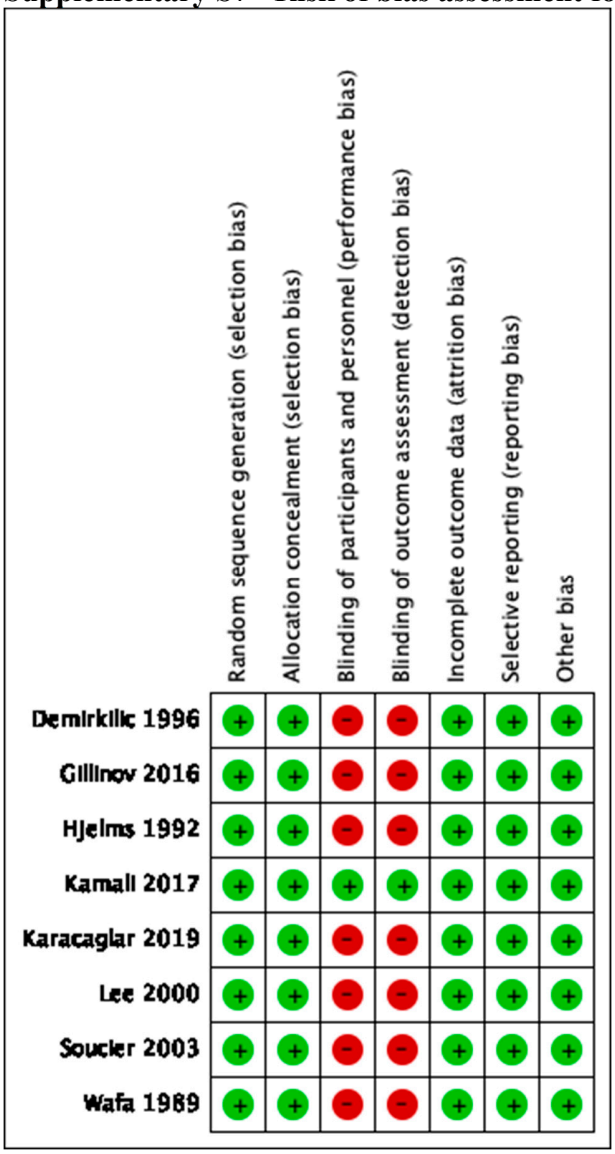
## AF recurrence (up to 3 months) – observational studies




## Mortality – observational studies

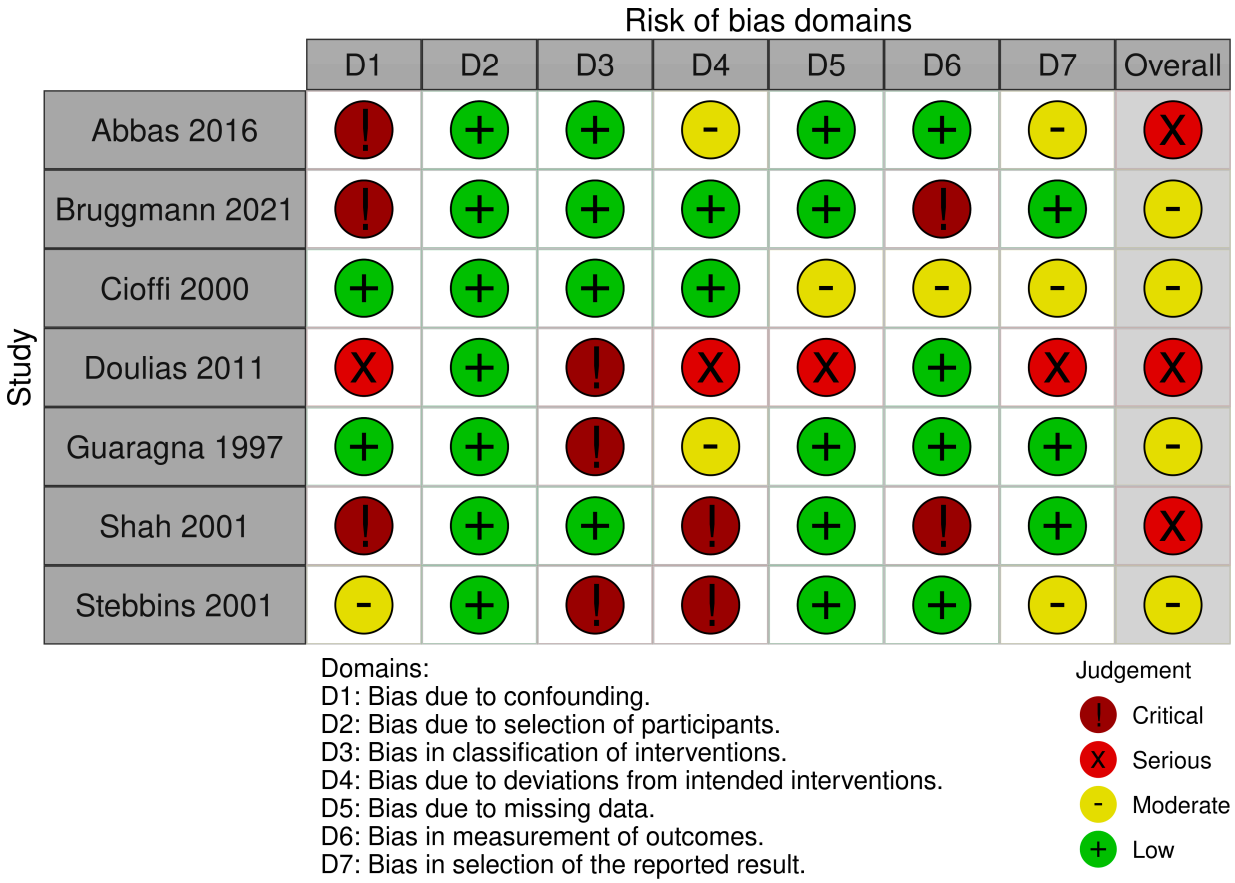


**Supplementary S7 - Risk of bias assessment for randomized trials**




Green: low risk of bias, yellow: unclear risk of bias, red: high risk of bias

**Supplementary S8 - Risk of bias assessment for observational studies**



## Supplementary S9 a-h - Individual risk of bias judgments for randomized trials

**Supplementary S9 a)** Demirkilic 1996

**Risk of bias**

| Bias domain | Judgment | Support for judgment |
|---|---|---|
| **Random sequence generation**<br><br>**(Selection bias)** | Low | No concerns |
| **Allocation concealment (Selection bias)** | Unclear,<br>Likely Low | No information, but no obvious imbalances in baseline characteristics between groups |
| **Blinding of participants, personnel, and outcome assessment**<br><br>**(Detection bias)** | High | No mention of blinding |
| **Incomplete outcome data**<br><br>**(Attrition bias)**<br><br>***All outcomes*** | Low | No concerns |
| **Selective reporting (Reporting bias)**<br><br>***All outcomes*** | Low | No concerns |
| **Other bias** | Low | No concerns |

| **Supplementary S9 b)** Gillinov 2016 | | |
|---|---|---|
| **Risk of bias** | | |
| **Bias domain** | **Judgment** | **Support for judgment** |
| **Random sequence generation**<br><br>**(Selection bias)** | Low | No concerns |
| **Allocation concealment (Selection bias)** | Low | Randomly permuted blocks of 2, 4, 6, stratified by center |
| **Blinding of participants, personnel, and outcome assessment**<br><br>**(Detection bias)** | High | No mention of blinding |
| **Incomplete outcome data**<br><br>**(Attrition bias)**<br><br>***All outcomes*** | Low | No concerns |
| **Selective reporting (Reporting bias)**<br><br>***All outcomes*** | Low | No concerns |
| **Other bias** | Low | No concerns |

**Supplementary S9 c)** Hjelms 1992

**Risk of bias**

| Bias domain | Judgment | Support for judgment |
|---|---|---|
| **Random sequence generation**<br><br>**(Selection bias)** | Likely Low | No information, but no obvious imbalances in baseline characteristics between groups |
| **Allocation concealment (Selection bias)** | Likely Low | No information, but no obvious imbalances in baseline characteristics between groups |
| **Blinding of participants, personnel, and outcome assessment**<br><br>**(Detection bias)** | High | No mention of blinding |
| **Incomplete outcome data**<br><br>**(Attrition bias)**<br><br>***All outcomes*** | Low | No concerns |
| **Selective reporting (Reporting bias)**<br><br>***All outcomes*** | Low | No concerns |
| **Other bias** | Low | No concerns |

| **Supplementary S9 d)** Kamali 2017 | | |
|---|---|---|
| **Risk of bias** | | |
| **Bias domain** | **Judgment** | **Support for judgment** |
| **Random sequence generation**<br><br>**(Selection bias)** | Low | No concerns |
| **Allocation concealment (Selection bias)** | Likely Low | No information, but no obvious imbalances in baseline characteristics between groups |
| **Blinding of participants, personnel, and outcome assessment**<br><br>**(Detection bias)** | Low | No concerns |
| **Incomplete outcome data**<br><br>**(Attrition bias)**<br><br>***All outcomes*** | Low | No concerns |
| **Selective reporting (Reporting bias)**<br><br>***All outcomes*** | Low | No concerns |
| **Other bias** | Low | No concerns |

| **Supplementary S9 e)** Karacaglar 2019 | | |
|---|---|---|
| **Risk of bias** | | |
| **Bias domain** | **Judgment** | **Support for judgment** |
| **Random sequence generation**<br><br>**(Selection bias)** | Low | No concerns |
| **Allocation concealment (Selection bias)** | Likely Low | No information, but no obvious imbalances in baseline characteristics between groups |
| **Blinding of participants, personnel, and outcome assessment**<br><br>**(Detection bias)** | High | Study mentions that it is "open-label" |
| **Incomplete outcome data**<br><br>**(Attrition bias)**<br><br>***All outcomes*** | Low | No loss to follow-up |
| **Selective reporting (Reporting bias)**<br><br>***All outcomes*** | Low | No evidence |
| **Other bias** | Low | No evidence |

| **Supplementary S9 f)** Lee 2000 | | |
|---|---|---|
| **Risk of bias** | | |
| **Bias domain** | **Judgment** | **Support for judgment** |
| **Random sequence generation**<br><br>**(Selection bias)** | Low | No concerns |
| **Allocation concealment (Selection bias)** | Likely Low | No information, but no obvious imbalances in baseline characteristics between groups |
| **Blinding of participants, personnel, and outcome assessment**<br><br>**(Detection bias)** | High | Study mentions that it is "unblinded" |
| **Incomplete outcome data**<br><br>**(Attrition bias)**<br><br>***All outcomes*** | Likely Low | No mention of attrition, other than 2 patients who died, both in the rhythm group |
| **Selective reporting (Reporting bias)**<br><br>***All outcomes*** | Low | Followed approved study protocol; researchers report pre-specified outcome measures |
| **Other bias** | Low | No evidence |

**Supplementary S9 g)** Soucier 2003

**Risk of bias**

| Bias domain | Judgment | Support for judgment |
|---|---|---|
| **Random sequence generation**<br><br>**(Selection bias)** | Likely Low | No information, but no obvious imbalances in baseline characteristics between groups |
| **Allocation concealment (Selection bias)** | Likely Low | No information, but no obvious imbalances in baseline characteristics between groups |
| **Blinding of participants, personnel, and outcome assessment**<br><br>**(Detection bias)** | High | Study mentions that it is "open-label" |
| **Incomplete outcome data**<br><br>**(Attrition bias)**<br><br>***All outcomes*** | Low | No loss to follow-up |
| **Selective reporting (Reporting bias)**<br><br>***All outcomes*** | Low | No evidence |
| **Other bias** | Low | No evidence |

| **Supplementary S9 h)** Wafa 1989 | | |
|---|---|---|
| **Risk of bias** | | |
| **Bias domain** | **Judgment** | **Support for judgment** |
| **Random sequence generation**<br><br>**(Selection bias)** | Low | Specific instructions regarding randomization were reported |
| **Allocation concealment (Selection bias)** | Low | Sealed envelope used for allocation |
| **Blinding of participants, personnel, and outcome assessment**<br><br>**(Detection bias)** | High | Did not state |
| **Incomplete outcome data**<br><br>**(Attrition bias)**<br><br>***All outcomes*** | Low | No loss to follow-up |
| **Selective reporting (Reporting bias)**<br><br>***All outcomes*** | Low | No evidence |
| **Other bias** | Low | No evidence |

**Supplementary S10 - Summary of findings: atrial fibrillation: rhythm vs rate control** – randomized trials

| Certainty assessment | | | | | | | № of patients | | Effect | | Certainty |
|---|---|---|---|---|---|---|---|---|---|---|---|
| № of studies | Study design | Risk of bias | Inconsistency | Indirectness | Imprecision | Other considerations | Rhythm control | Rate control | Relative (95% CI) | Absolute (95% CI) | |
| **Length of stay** | | | | | | | | | | | |
| 5 | randomized trials | serious[a] | serious[b and c] | not serious | serious[d] | skewed distribution change throughout data | 417 | 398 | - | MD **0.8 day lower** (3.0 lower to 1.4 higher) | ⊕◯◯◯ Very low |
| **Atrial fibrillation recurrence within 1 week** | | | | | | | | | | | |
| 8 | randomized trials | serious[a] | not serious | not serious | serious[d] | none | 79/506 (15.6%) | 51/451 (11.3%) | **RR 1.1** (0.6 to 1.9) | **10 more per 1,000** (from 41 fewer to 97 more) | ⊕⊕◯◯ Low |
| **Atrial fibrillation recurrence up to 1 month** | | | | | | | | | | | |
| 3 | randomized trials | serious[a] | not serious | not serious | serious[d] | none | 18/312 (5.8%) | 19/311 (6.1%) | **RR 0.9** (0.5 to 1.8) | **4 fewer per 1,000** (from 31 fewer to 46 more) | ⊕⊕◯◯ Low |
| **Atrial fibrillation recurrence up to 3 months** | | | | | | | | | | | |
| 3 | randomized trials | serious[a] | not serious | not serious | serious[d] | none | 5/348 (1.4%) | 5/315 (1.6%) | **RR 1.0** (0.3 to 3.4) | **1 fewer per 1,000** (from 12 fewer to 38 more) | ⊕⊕◯◯ Low |

**Mortality**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | randomized trials | serious[a] | not serious | not serious | serious[d] | none | 16/419 (3.8%) | 9/396 (2.3%) | **RR 1.6** (0.7 to 3.5) | **14 more per 1,000** (from 6 fewer to 57 more) | ⊕⊕◯◯ Low |

**Stroke**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | randomized trials | serious[a] | not serious | not serious | very serious[e] | none | 4/297 (1.3%) | 6/318 (1.9%) | **RR 0.7** (0.1 to 4.6) | **2 fewer per 1,000** (from 7 fewer to 29 more) | ⊕◯◯◯ Very low |

**CI:** confidence interval; **MD:** mean difference; **RR:** risk ratio

*Explanations*

a. Serious concerns with blinding
b. High heterogeneity
c. Certainty of evidence was not downgraded for inconsistency because it was already downgraded for imprecision
d. Wide confidence interval
e. Very wide confidence interval

**Supplementary S11 - Summary of findings: atrial fibrillation: rhythm vs rate control** – observational studies

| Certainty assessment | | | | | | | № of patients | | Effect | | Certainty |
|---|---|---|---|---|---|---|---|---|---|---|---|
| № of studies | Study design | Risk of bias | Inconsistency | Indirectness | Imprecision | Large effect, dose-response effect, all plausible confounding and bias | Rhythm | Rate | Relative (95% CI) | Absolute (95% CI) | |
| **Length of stay** | | | | | | | | | | | |
| 4 | observational studies | serious[a] | not serious | not serious | not serious | yes[b] | 210 | 128 | - | MD **0.1 day higher** (0.6 lower to 0.8 higher) | ⊕◯◯◯ Very low |
| **Atrial fibrillation recurrence within 1 week** | | | | | | | | | | | |
| 3 | observational studies | serious[a] | not serious | not serious | serious[c] | none | 26/119 (21.9%) | 56/155 (36.1%) | **RR 0.8** (0.5 to 1.1) | **3 fewer per 1,000** (from 5 fewer to 1 more) | ⊕◯◯◯ Very low |
| **Atrial fibrillation recurrence up to 1 month** | | | | | | | | | | | |
| 2 | observational studies | serious[a] | not serious | not serious | serious[c] | none | 7/84 (8.3%) | 6/81(7.4%) | **RR 1.2** (0.4 to 3.8) | **2 more per 1,000** (from 5 fewer to 26 more) | ⊕◯◯◯ Very low |

| Certainty assessment | | | | | | | № of patients | | Effect | | Certainty |
|---|---|---|---|---|---|---|---|---|---|---|---|
| № of studies | Study design | Risk of bias | Inconsistency | Indirectness | Imprecision | Large effect, dose-response effect, all plausible confounding and bias | Rhythm | Rate | Relative (95% CI) | Absolute (95% CI) | |
| **Atrial fibrillation recurrence up to 3 months** | | | | | | | | | | | |
| 3 | observational studies | serious[a] | not serious | not serious | serious[c] | none | 72/174 (41.4%) | 23/95 (24.2%) | **RR 1.2** (0.8 to 1.6) | **8 more per 1,000** (from 6 fewer to 108 more) | ⨁◯◯◯ Very low |
| **Mortality** | | | | | | | | | | | |
| 2 | observational studies | serious[a] | not serious | not serious | serious[c] | none | 0/98 (0%) | 5/115 (4.3%) | **RR 0.2** (0 to 1.9) | **6 fewer per 1,000** (from 8 fewer to 7 more) | ⨁◯◯◯ Very low |

**CI:** confidence interval; **MD:** mean difference; **RR:** risk ratio

*Explanations*

a. Moderate risk of bias issues in all observational studies
b. Non-normal distribution
c. Wide confidence intervals