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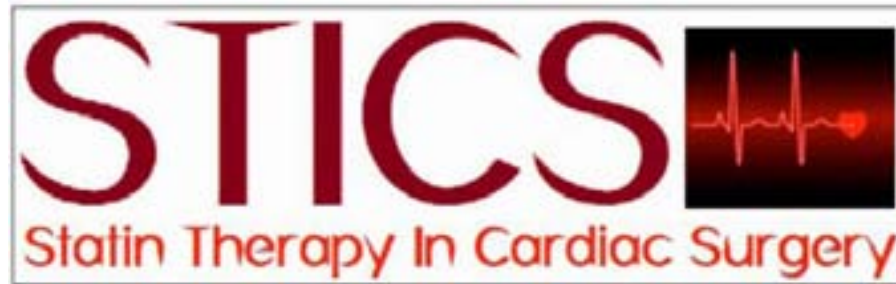
Funded by British Heart Foundation, FP7 EUTRAF, Oxford Biomedical Research Centre (NIHR), UK Medical Research Council, and an unrestricted grant (\$100K) from AstraZeneca

Incidence and cost of postoperative complications in cardiac surgery

- Surgical revascularisation is the treatment of choice for patients with multi-vessel coronary artery disease
- Post-operative complications (e.g., renal failure, myocardial infarction and atrial fibrillation) are common (**35-40% of patients**) and are associated with increased mortality, disability, and costs.
- **Postoperative AF** is associated with a **2-fold increase in stroke and mortality**, and excess cost of \$8K-18K/patient
- Previous trials indicated that perioperative statin therapy halved the rate of AF and prevented heart muscle injury

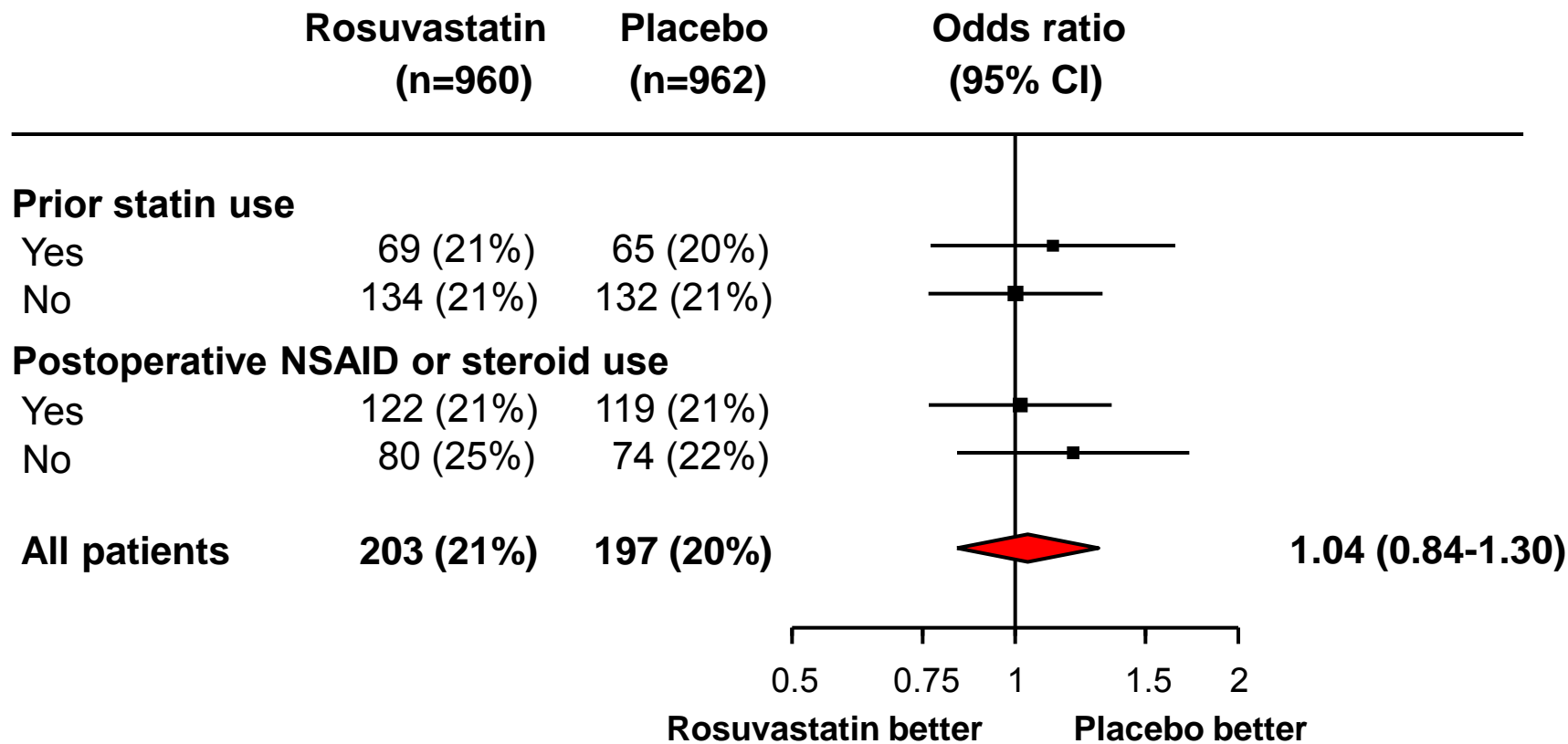
Limitations of previous trials of perioperative statin therapy

- All of the previous trials were small (total of 1300 patients in 14 trials)
- Methodological problems
 - Many types of patient were excluded
 - Outcomes were not assessed systematically
 - Outcome assessment was not always “blind”
 - Analysis was not always by “intention-to-treat”
 - Selected results were retrospectively emphasised
- A much larger randomised placebo-controlled trial of perioperative statin, with systematic assessment of outcomes, was needed.

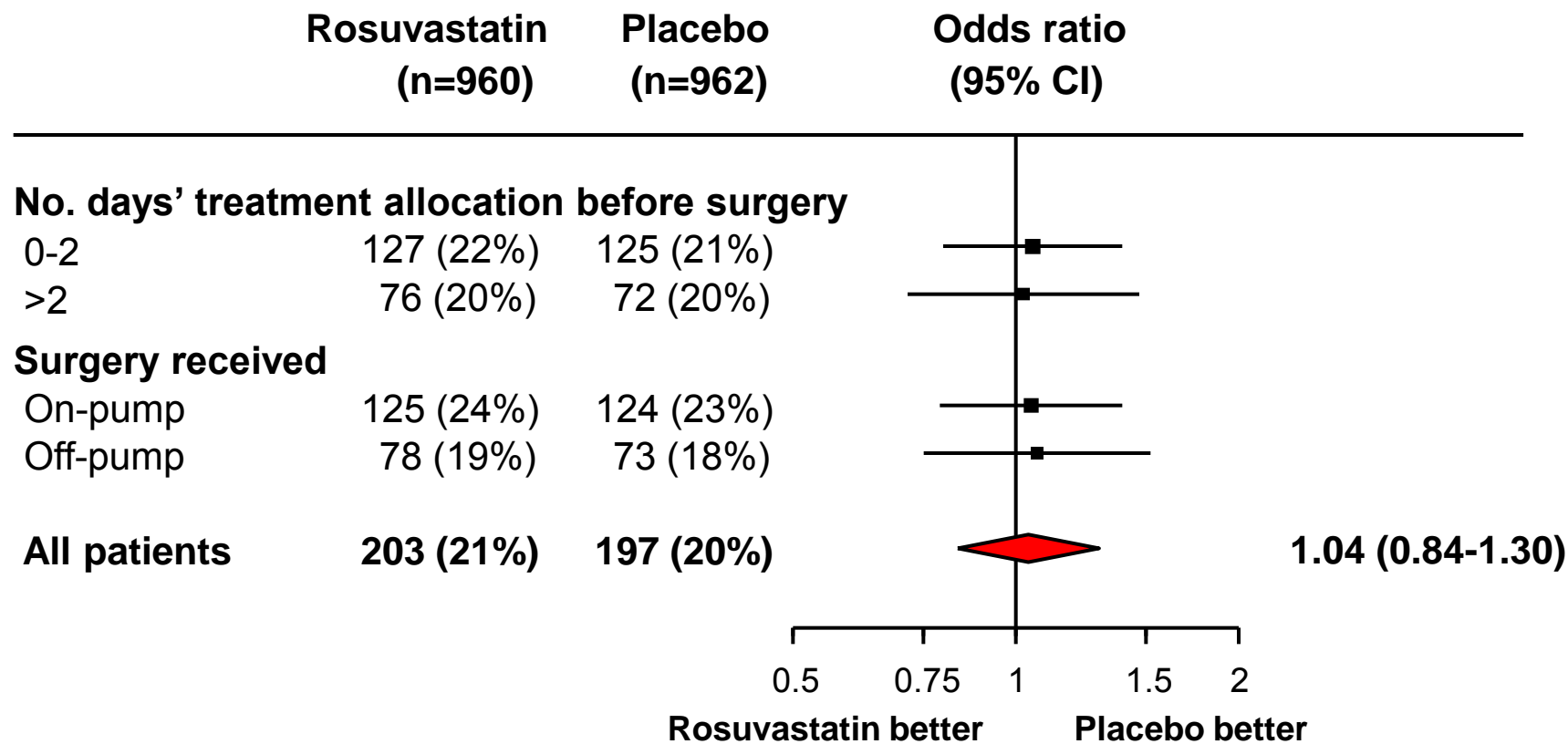


- 1922 patients in sinus rhythm awaiting elective cardiac surgery
- Double-blind randomised trial:
 - Rosuvastatin (20 mg daily) vs. Placebo
- Treatment started up to 8 days before, and continued for 5 days after surgery
- Systematic assessment of effects on:
 - Atrial fibrillation (AF) by 5-day Holter ECG
 - Myocardial injury by Troponin assays(as well as other major clinical outcomes)

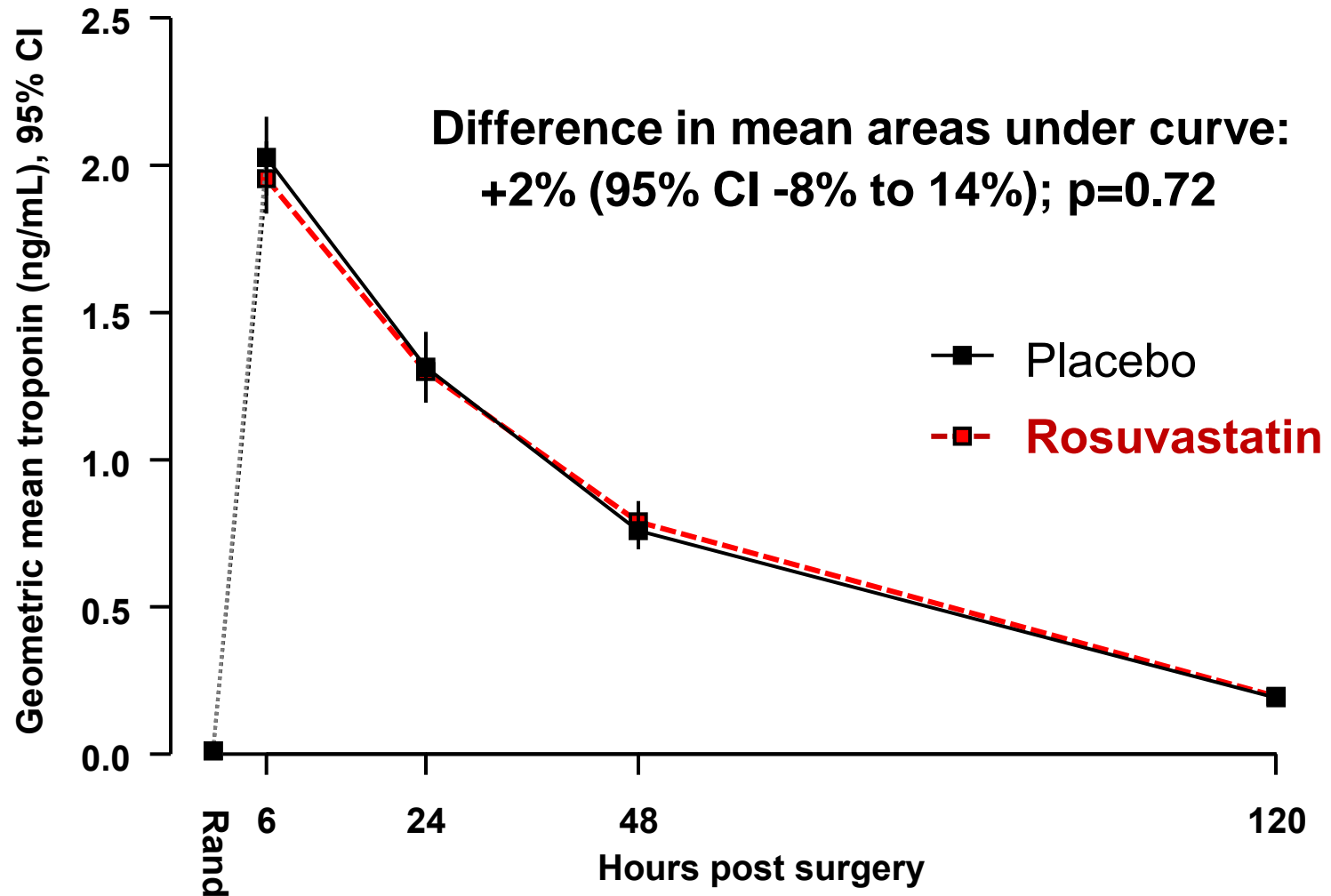
Atrial Fibrillation



Atrial Fibrillation



Cardiac muscle injury (Troponin I)





Summary & Conclusion

- More patients in STICS than in all other trials of perioperative statin in cardiac surgery combined.
- Intensive perioperative treatment with Rosuvastatin has no beneficial effects on postoperative AF, heart muscle damage, or other complications after cardiac surgery.
- Pre-operative statin use, type of surgery, postoperative use of anti-inflammatory drugs, and time of initiation of randomized treatment had no bearing on the results.
- High-dose perioperative statin therapy in cardiac surgery does not prevent postoperative complications.