

Comparison of cardiac surgery with left atrial surgical ablation vs. cardiac surgery without atrial ablation in patients with coronary and/or valvular heart disease plus atrial fibrillation: final results of the PRAGUE-12 randomized multicentre study[†]

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Aims

Surgical ablation procedure can restore sinus rhythm (SR) in patients with atrial fibrillation (AF) undergoing cardiac surgery. However, it is not known whether it has any impact on long-term clinical outcomes.

Methods and results

This multicentre study randomized 224 patients with AF scheduled for valve and/or coronary surgery: group A (left atrial surgical ablation, $n = 117$) vs. group B (no ablation, $n = 107$). The primary efficacy outcome was the SR presence (without any AF episode) during a 24 h electrocardiogram (ECG) after 1 year. The primary safety outcome was

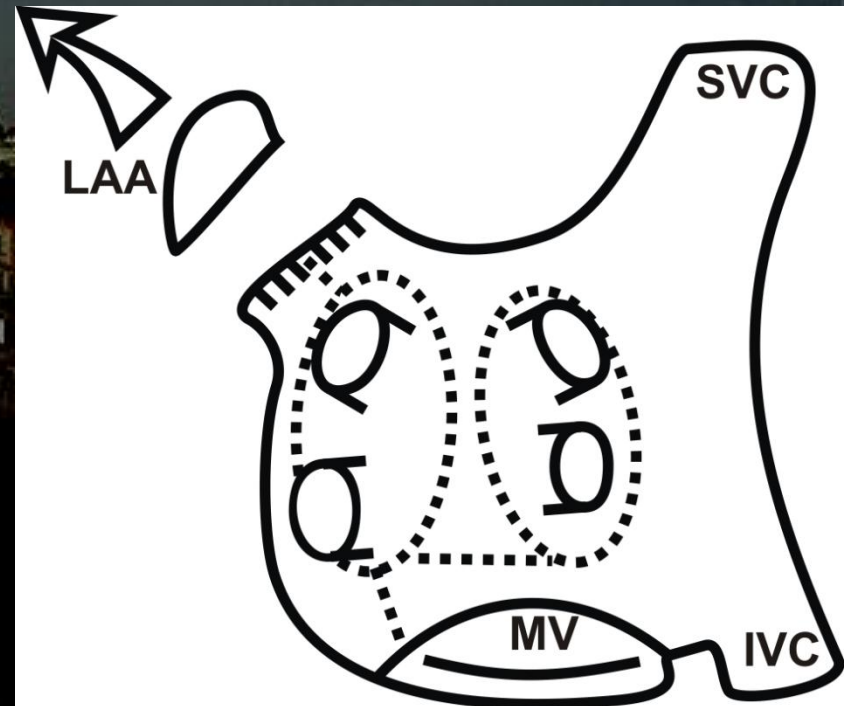
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Background.

- Surgical atrial ablation procedure (MAZE) may restore sinus rhythm (SR) in pts with atrial fibrillation (AF) undergoing cardiac surgery.
- Hypothesis *(formulated by cardiac surgeons):*
 - (1) MAZE restores SR after surgery
 - (2) without increasing perioperative complications
 - (3) SR presence may improve long term outcomes.

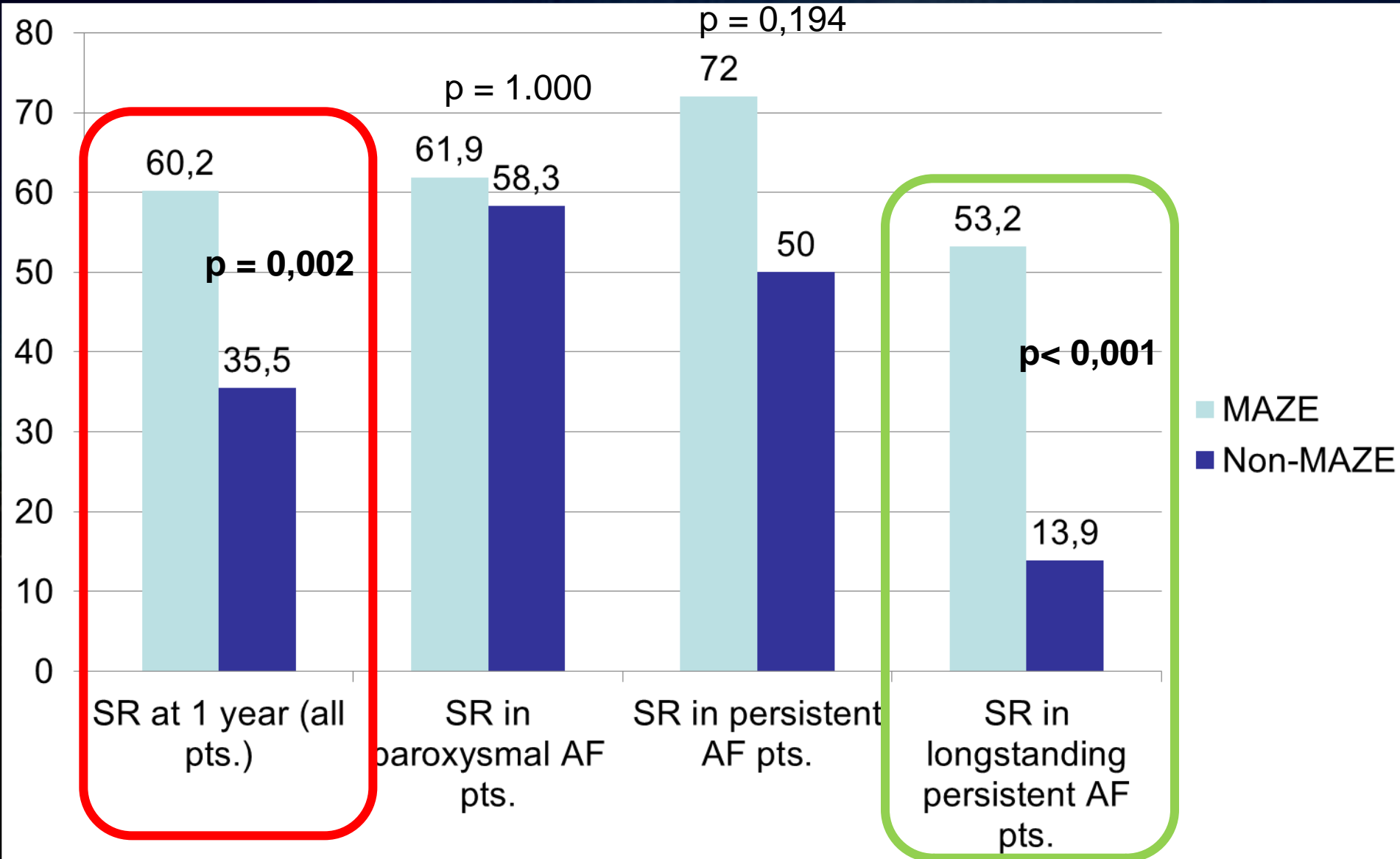
Surgical procedure

- Cryomaze (ATS) in 97% pts , radiofrequency in 3% pts.
- Ablation time for each lesion 90 seconds.
- Lesion set: pulmonary veins ablation, left atrial appendage exclusion and three interconnecting lesions
- Epicardially or endocardially (based on whether LA is opened during the main surgical procedure)



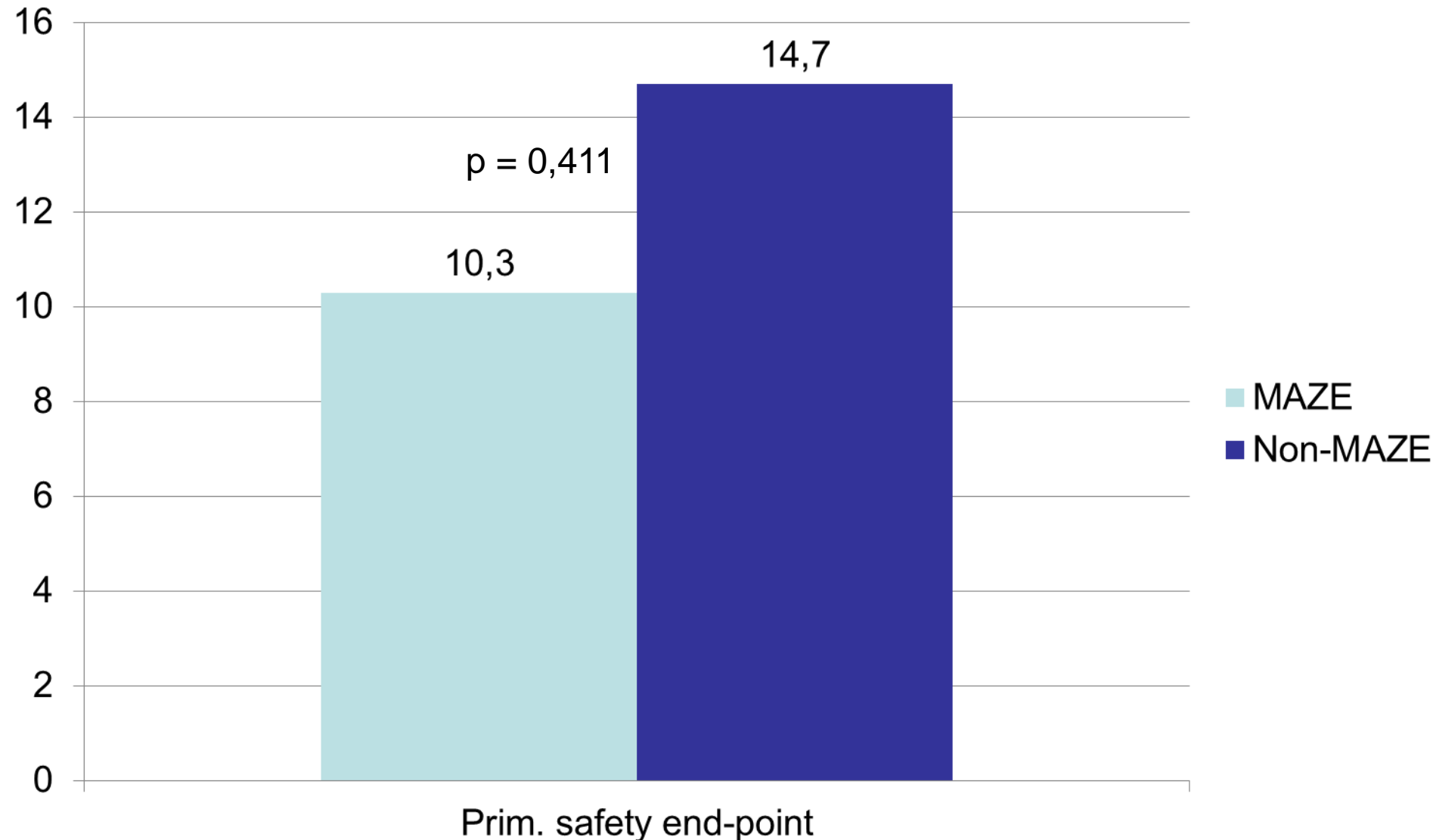
Sinus rhythm after 1 year

(primary efficacy end-point, Holter 24-hour ECG)



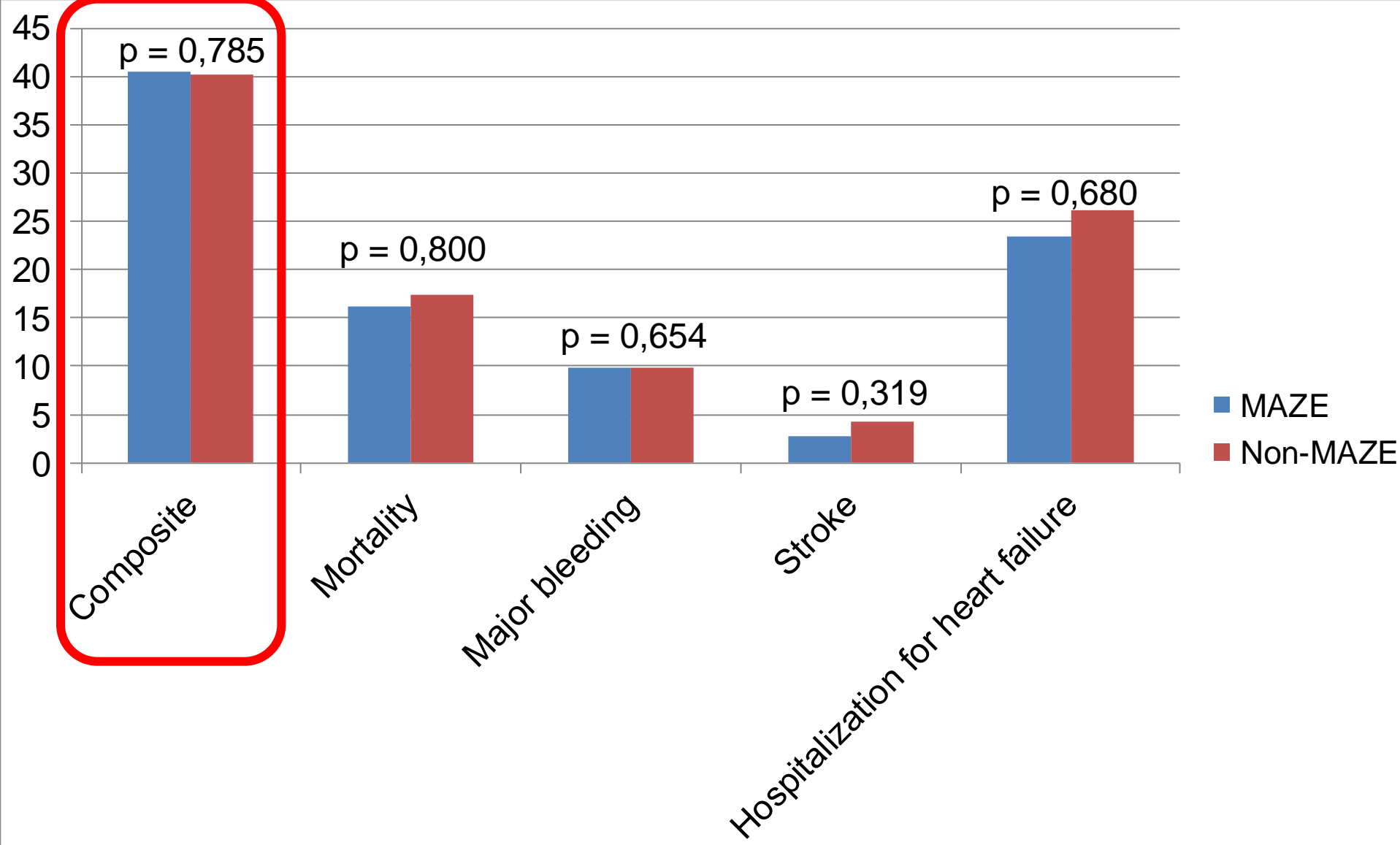
Perioperative complications

Primary safety outcome (death / myocardial infarction / stroke / renal failure at 30 days)



Long-term adverse events

(Death/ major bleeding/ stroke/ hospitalization for heart failure after 1 year)



Conclusions

- (1) Surgical ablation improves the likelihood of SR presence up to 1 year postoperatively
- (2) Without perioperative complications
- (3) No impact on 1-year clinical outcomes

Most significant rhythm benefit in pts with longstanding persistent AF (no benefit seen in paroxysmal AF).

