

Can AF ablation reduce stroke?

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Barts Health **NHS**
NHS Trust

Conflict of interest

Speaker agreements/research grants/
contracts/advisory board:

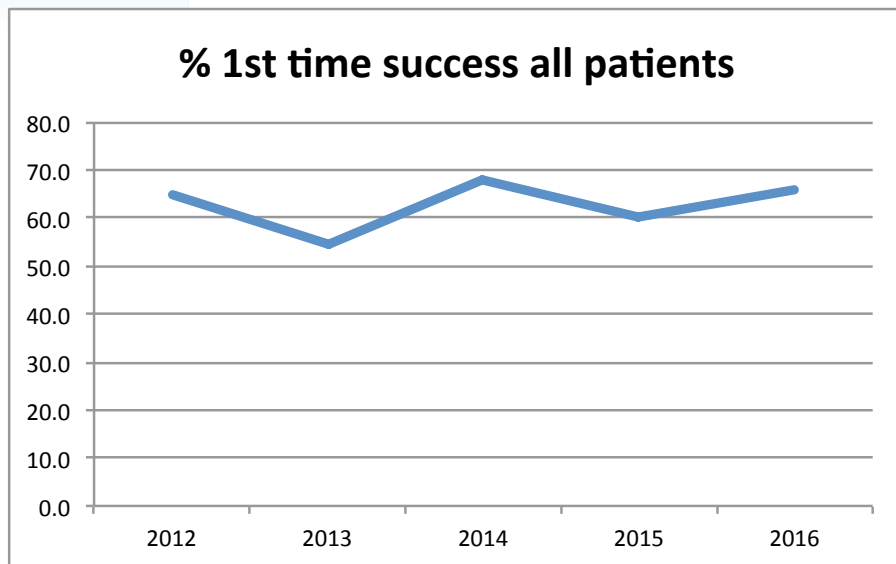
Medtronic, Biosense webster, Boston
scientific, St Jude, Boehringer Ingelheim,



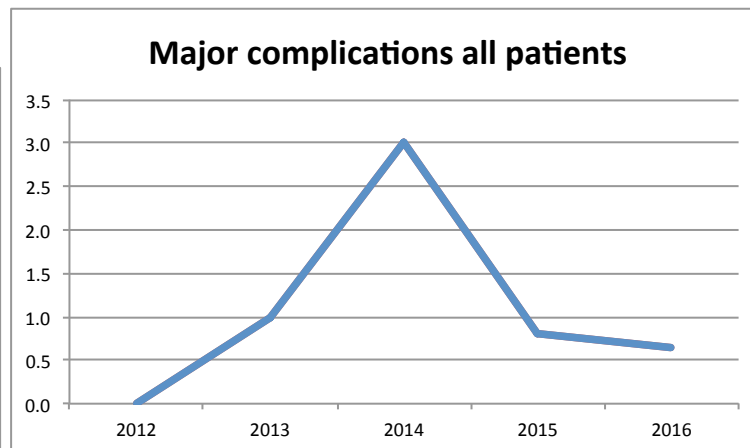
Background

- Risks of AF ablation are falling
 - Uninterrupted anticoagulation - stroke
- Is catheter ablation now good enough to reduce the risk of stroke in AF?

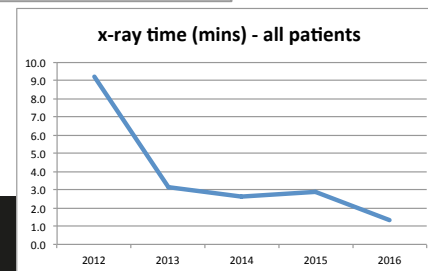
% 1st time success all patients



Major complications all patients



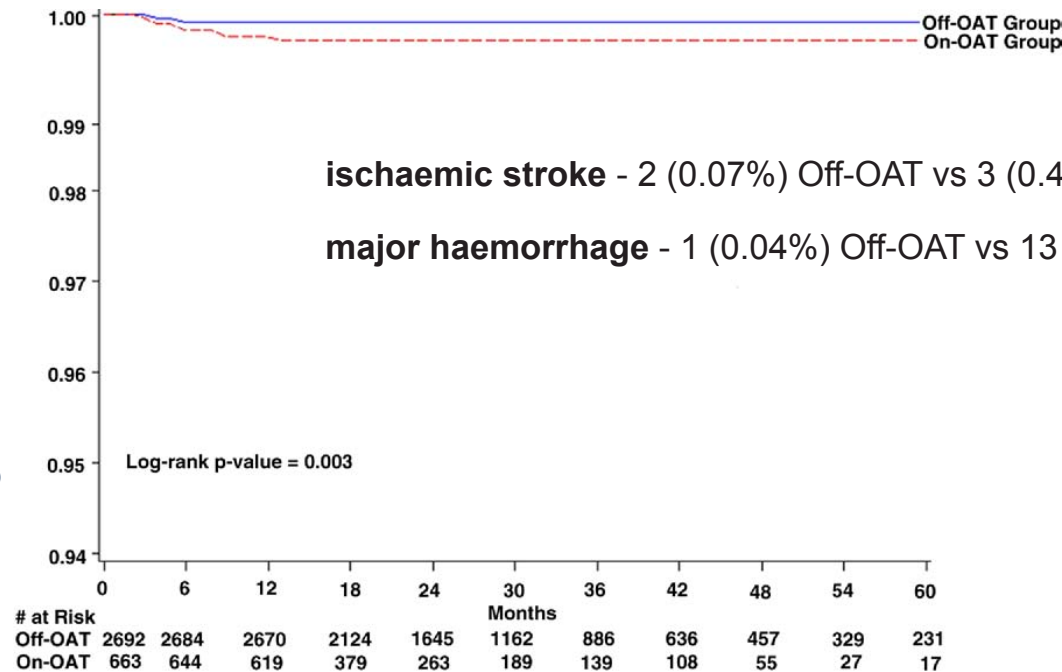
x-ray time (mins) - all patients



Stopping OAC post ablation

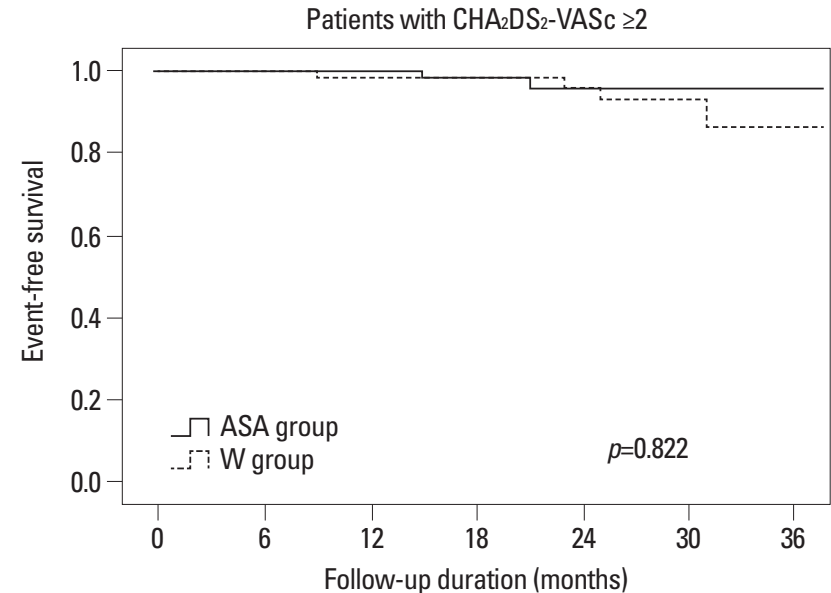
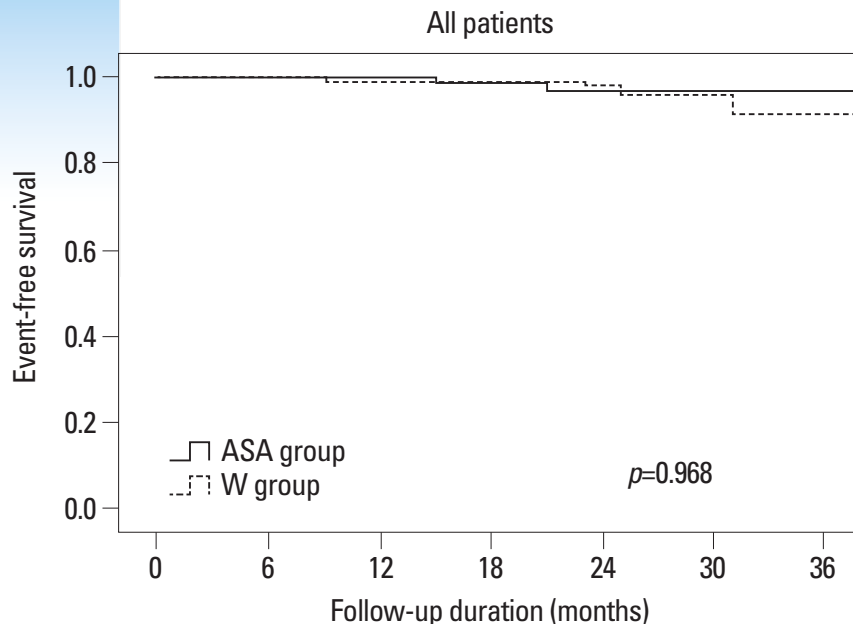
- clinician led decision on >3000 pts if free of AF at 3 month follow up
- OAC switched to ASA
- CHADSVasc2 OAC>ASA

Event-Free Survival Post-Ablation
Thromboembolic and
Hemorrhagic Strokes

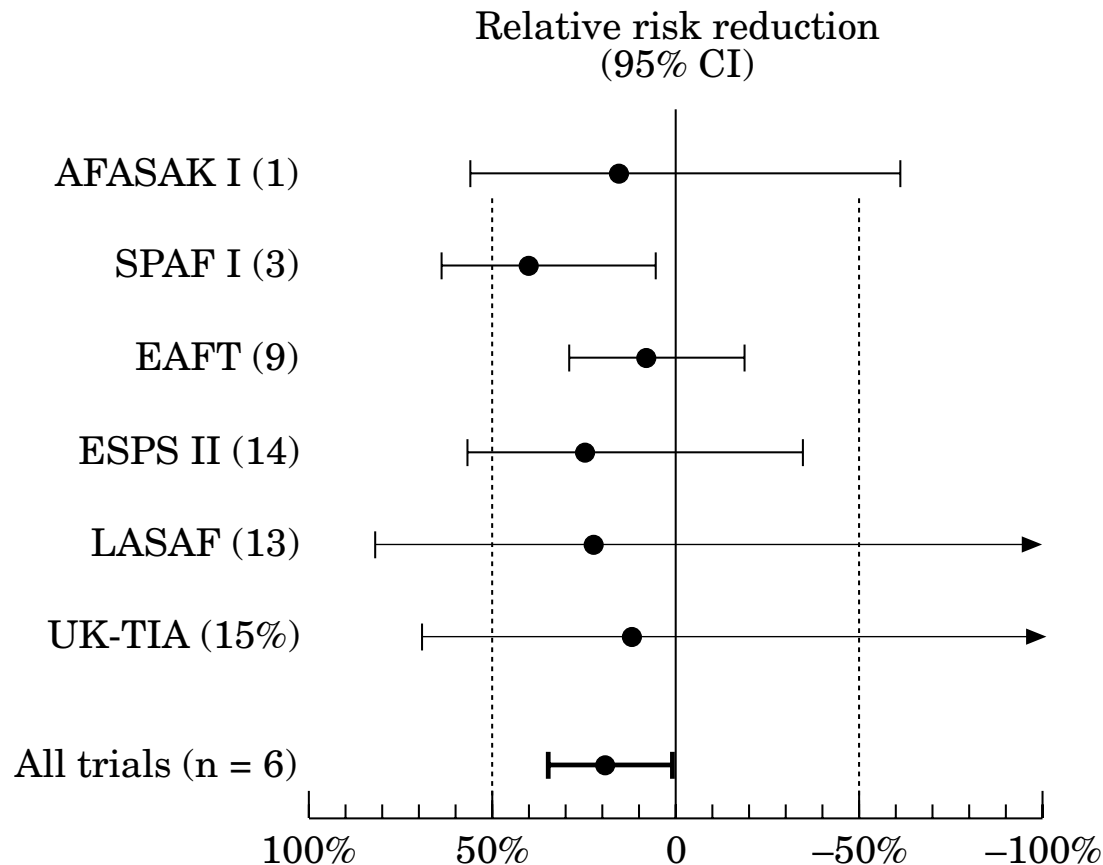


Stopping OAC post ablation

- case controlled -ASA (CHADSVasc 2.78) vs warfarin CHADSVasc 2.82) 3 months after successful ablation
- combined thromboembolic and bleeding events



Does Aspirin have any value in AF?



Risks of aspirin vs warfarin

- n=973, aged >75yrs
- RCT aspirin vs warfarin
- Warfarin as safe as aspirin

	Warfarin (%)	Aspirin (%)	P
Stroke	1.6	3.4	0.003
Haemorrhagic stroke	0.5	0.4	0.83
All major haemorrhage	1.9	2	0.9



Aspirin vs NOAC

AVERROES

Apixaban 5mg bd versus aspirin n=5599 patients

Stopped early:

Strokes - 1.9% (Apixaban) versus 3.9% (Aspirin)

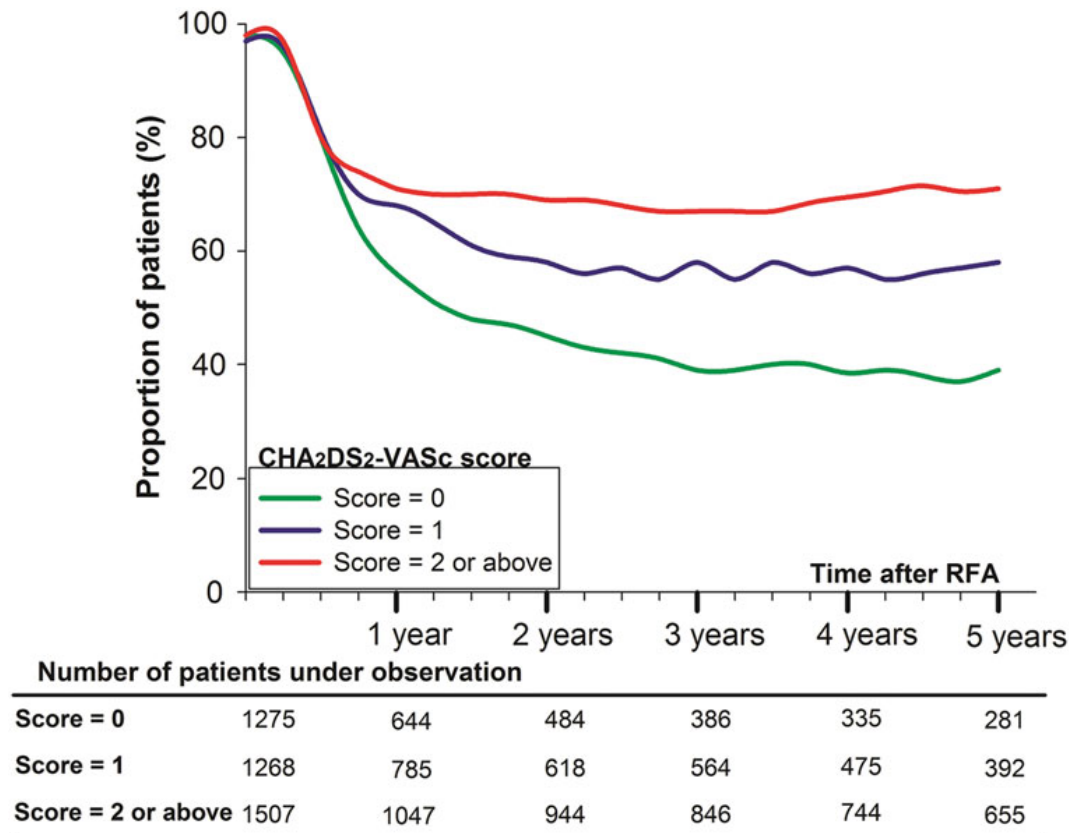
Similar rates of bleeding

Major bleed 1.4% (Apixaban) versus 1.2% (Aspirin)



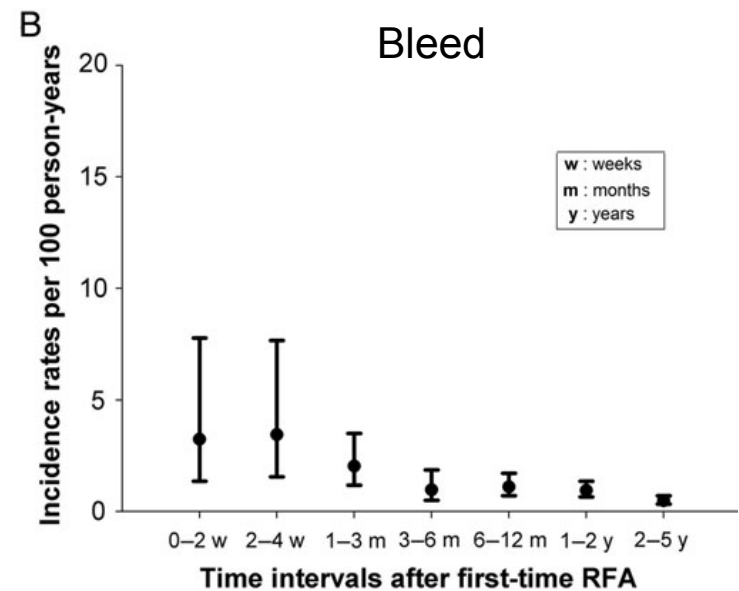
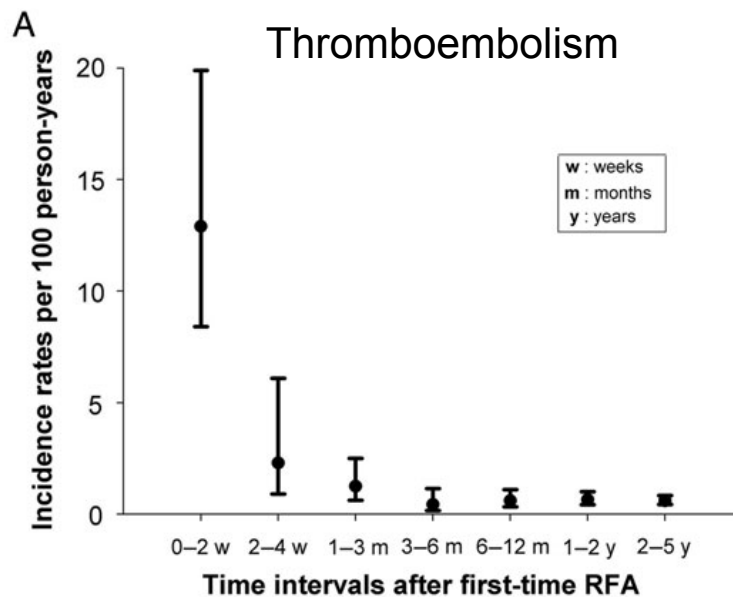
Stopping OAC post ablation

- Danish registry n=4050 1st time AF ablation 2000-11



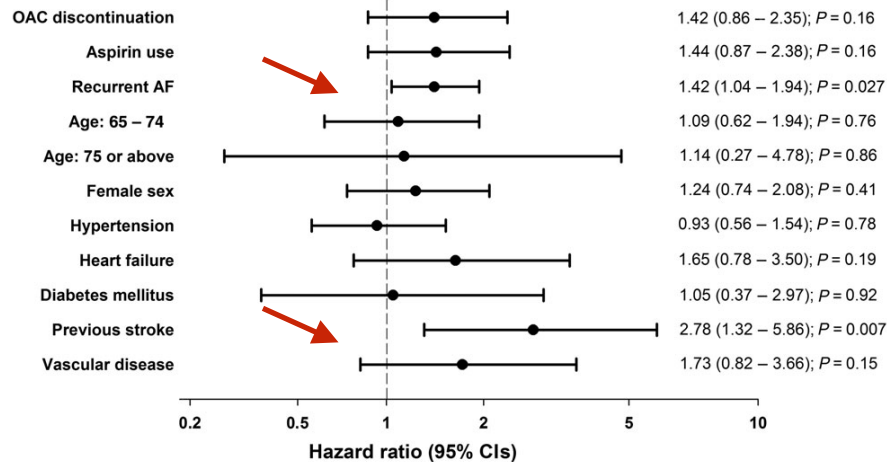
Stroke risk after AF ablation

- Ablation vs no ablation (n=15848) rhythm control
- 2.5% vs 7% thromboembolism
- ablation vs no ablation risk ratio 0.47 (0.39 – 0.57)_{95%CI}.
- Most events occur in first 3 months

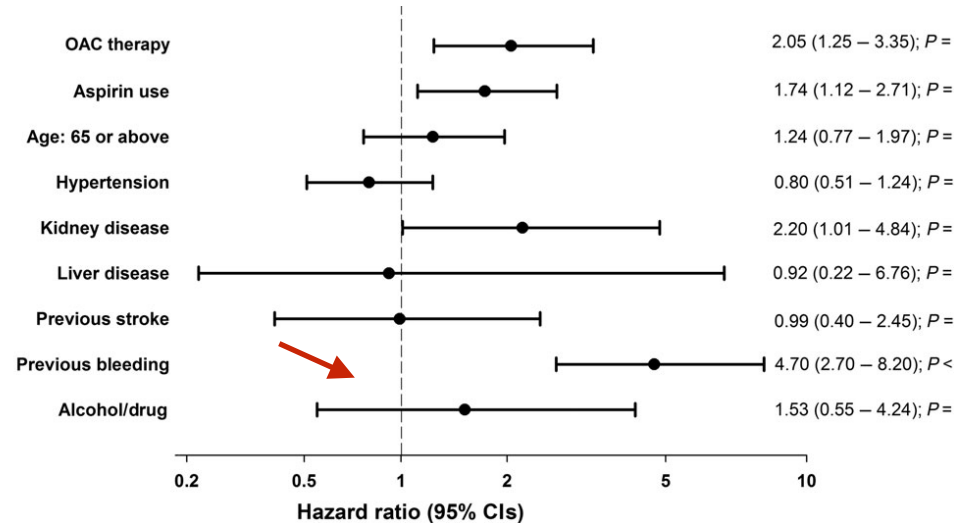


Stroke risk after AF ablation

Thromboembolism



Bleed



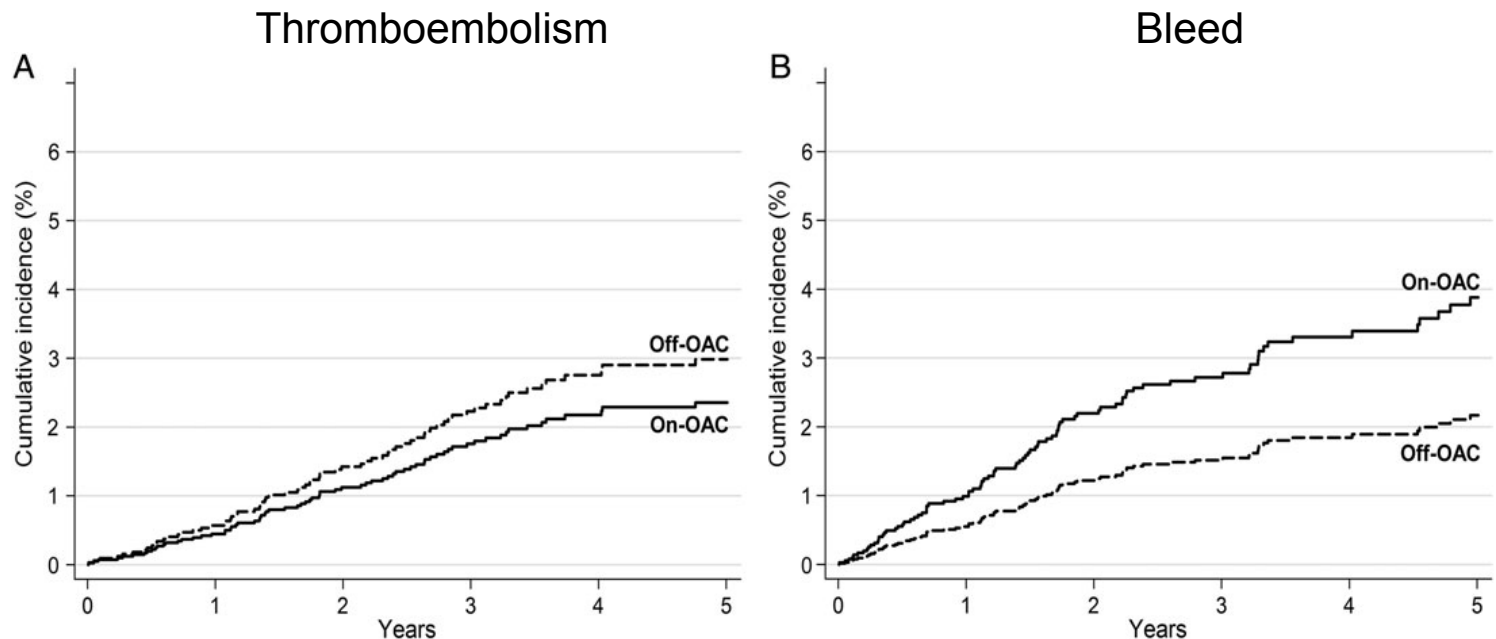
Who to stop?

- No PH of stroke or AF especially if PH of bleed



Impact of stopping OAC after AF ablation

- Stopping OAC
 - ↓bleed 1.8%
 - ↑thromboembolism 0.6%



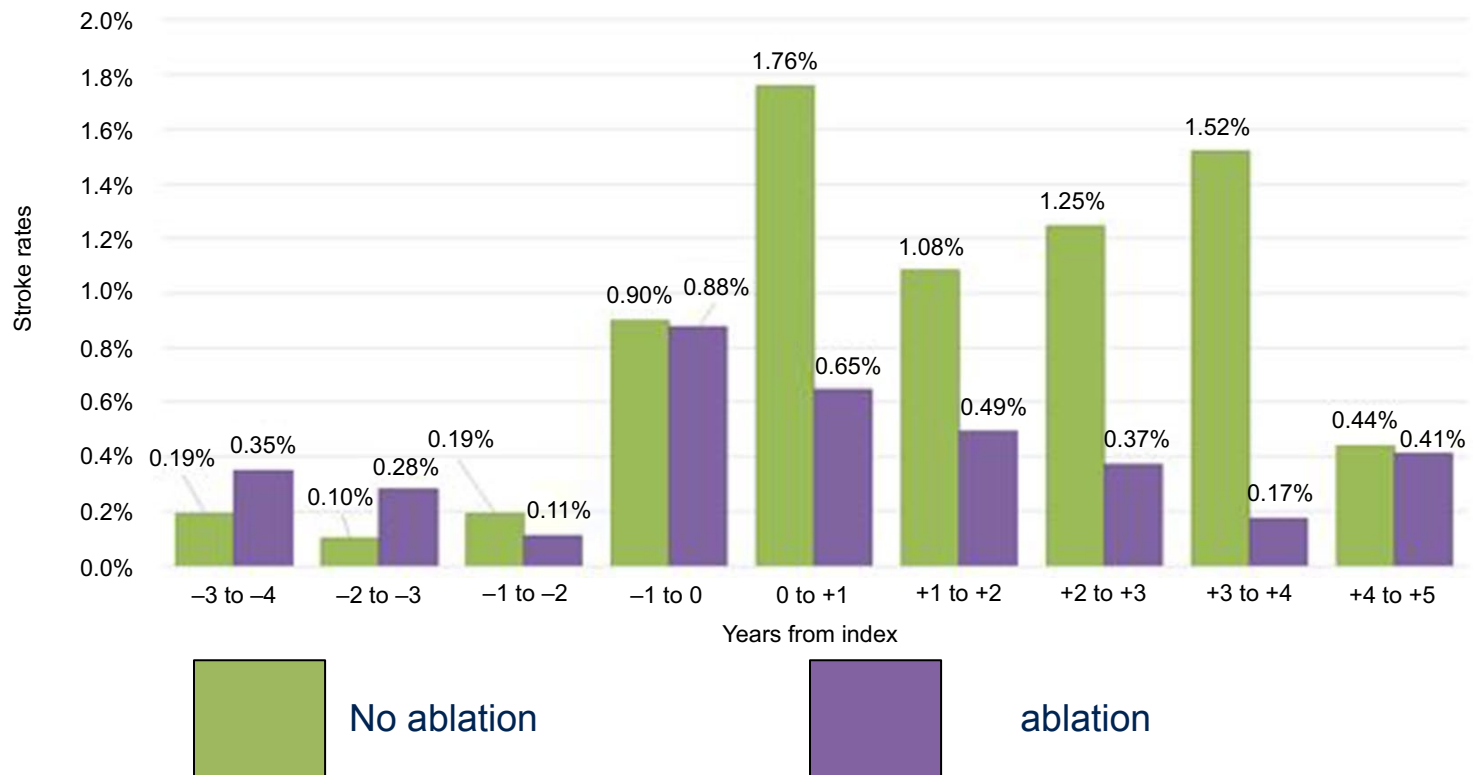
Stroke risk after AF ablation

- UK registry of hospital episode statistics
- 4991 AF ablations matched to AF controls
- 5406 AF ablations to CVersion controls



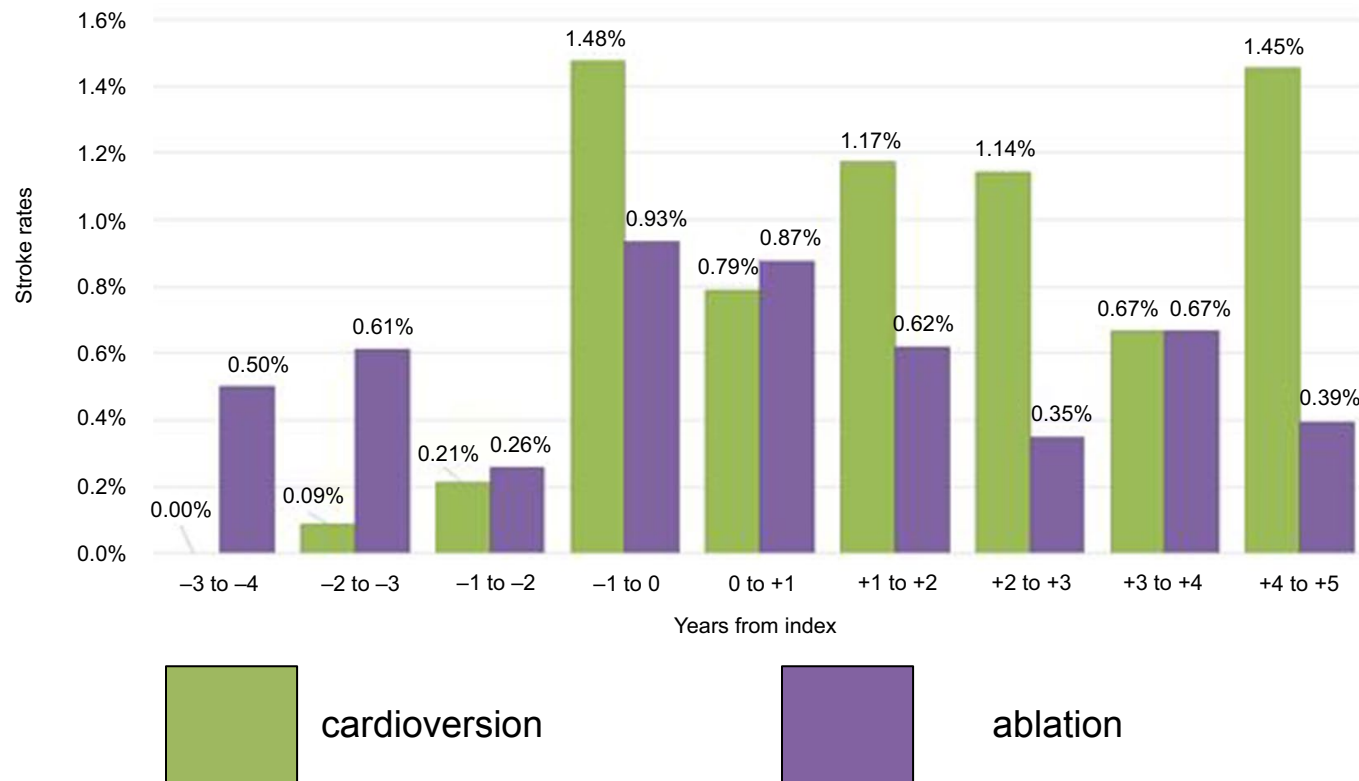
AF ablation vs no AF ablation

- Preablation stroke rate higher
- Post ablation falls significantly



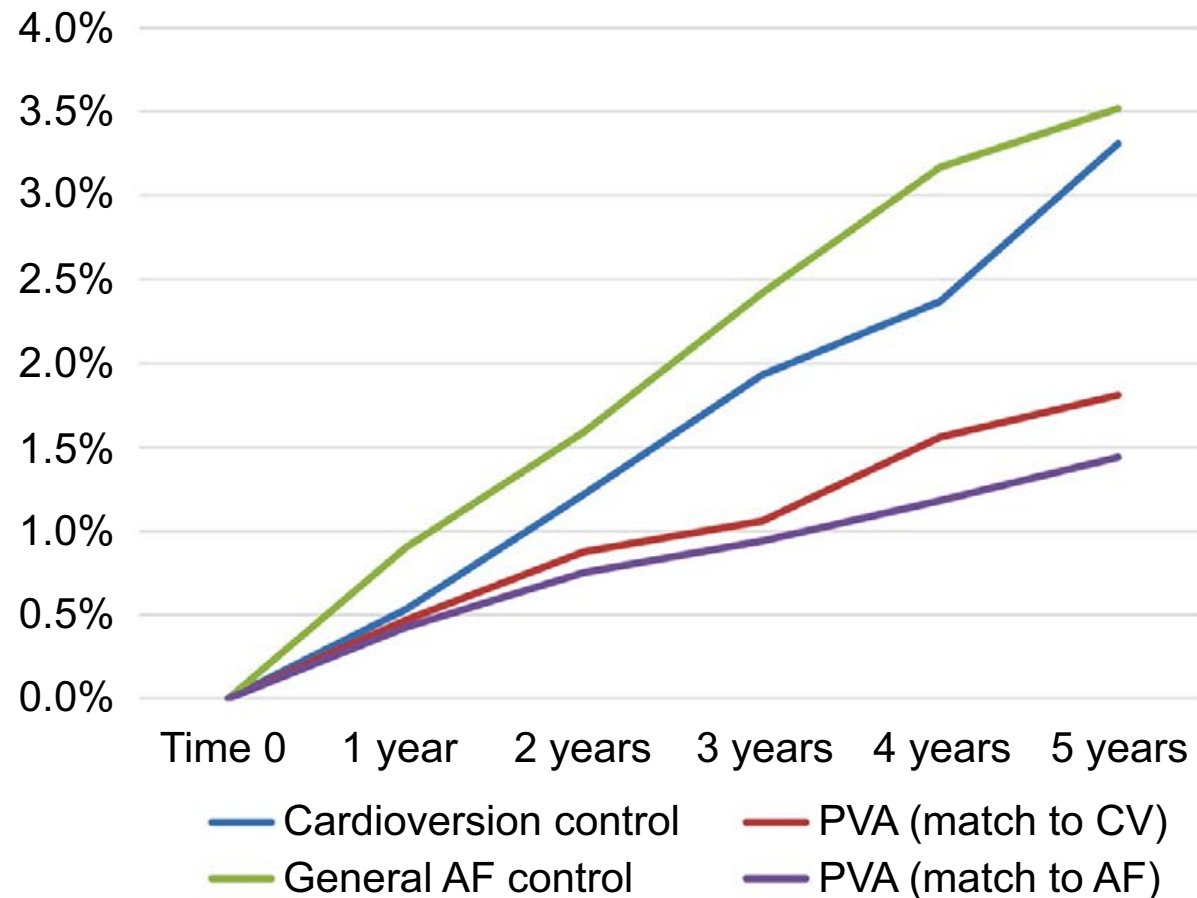
AF ablation vs Cardioversion

- Preablation stroke rate higher
- Post ablation falls significantly



Stroke impact of AF ablation

- Stroke events

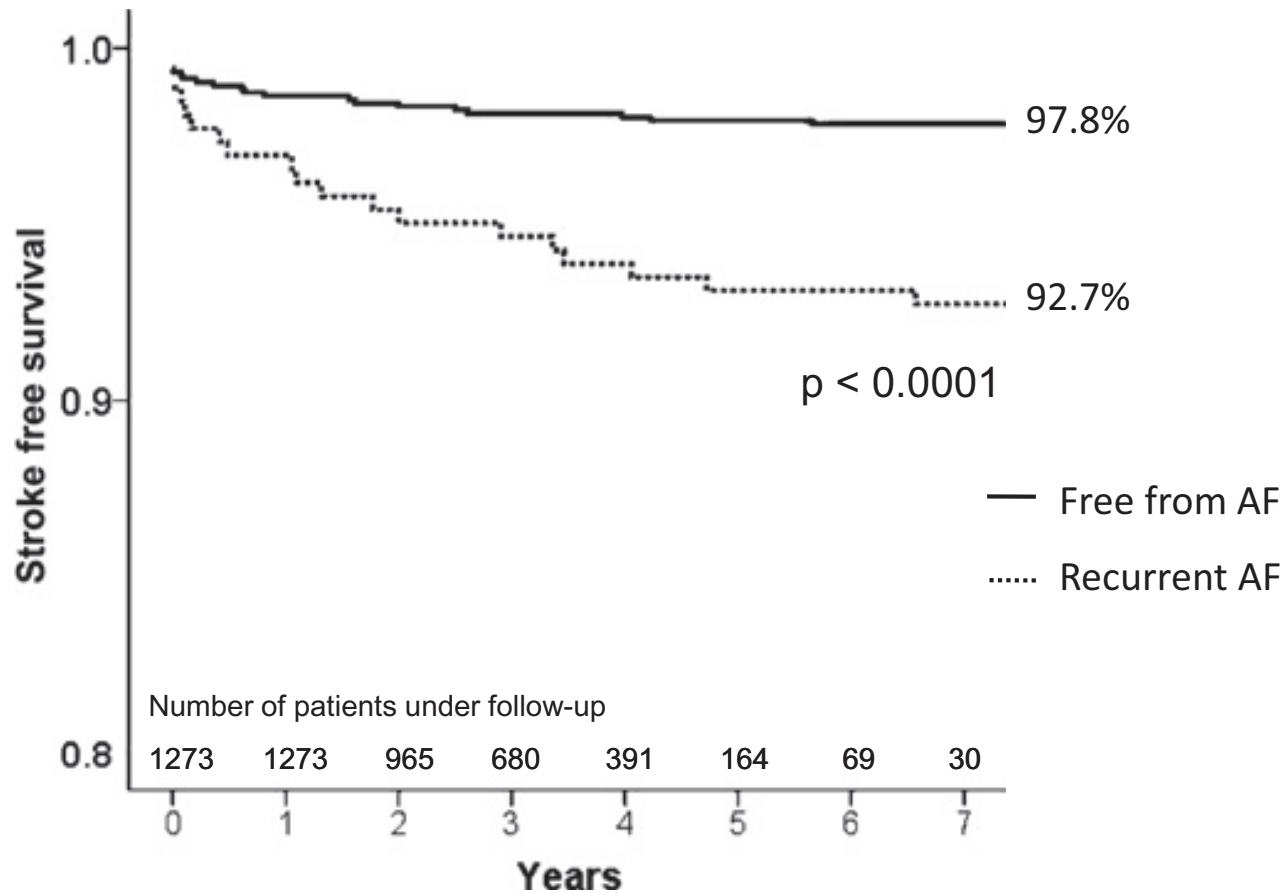


AF ablation and stroke risk

- n=1273 followed up for 3.1 (1.0-9.6) yrs
- multicentre international registry of patients undergoing AF ablation
- aim:
 - does AF ablation reduce risk of stroke or death
 - impact of outcome of ablation on stroke risk
 - impact of stopping anticoagulation post ablation

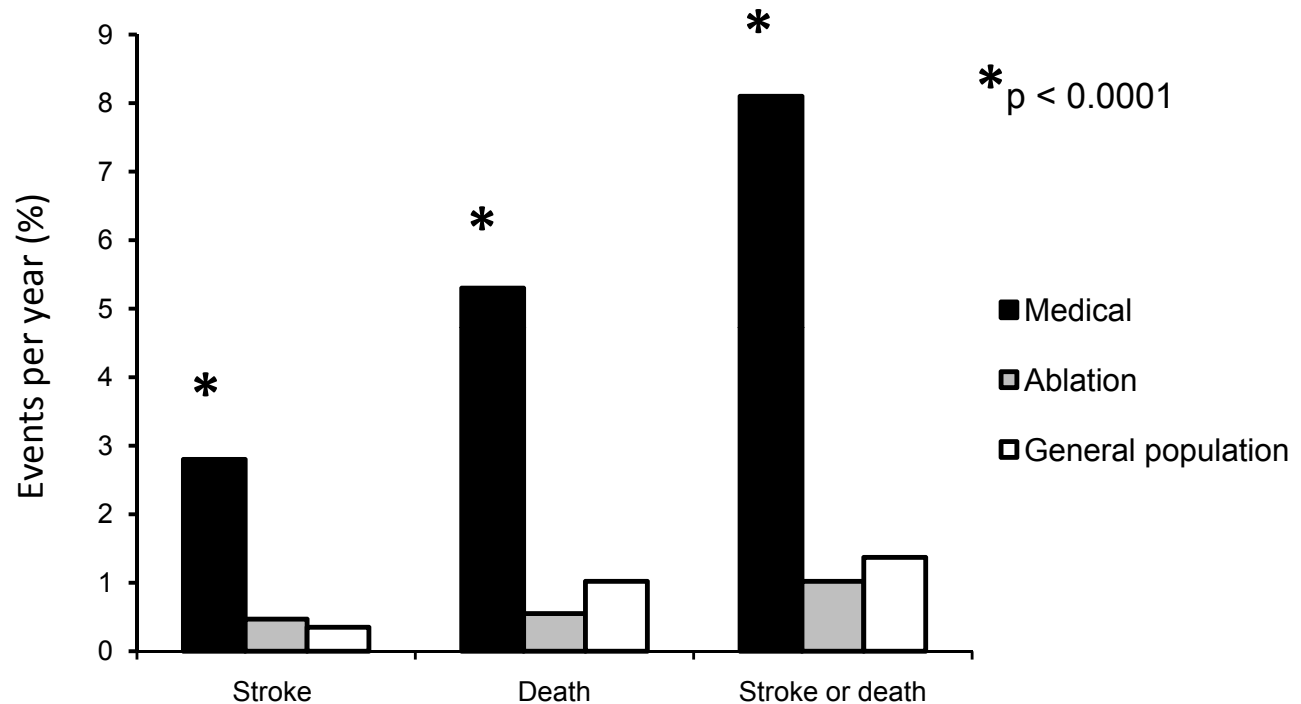


Impact of outcome on stroke risk



Prognosis after AF ablation

- Compared with general population



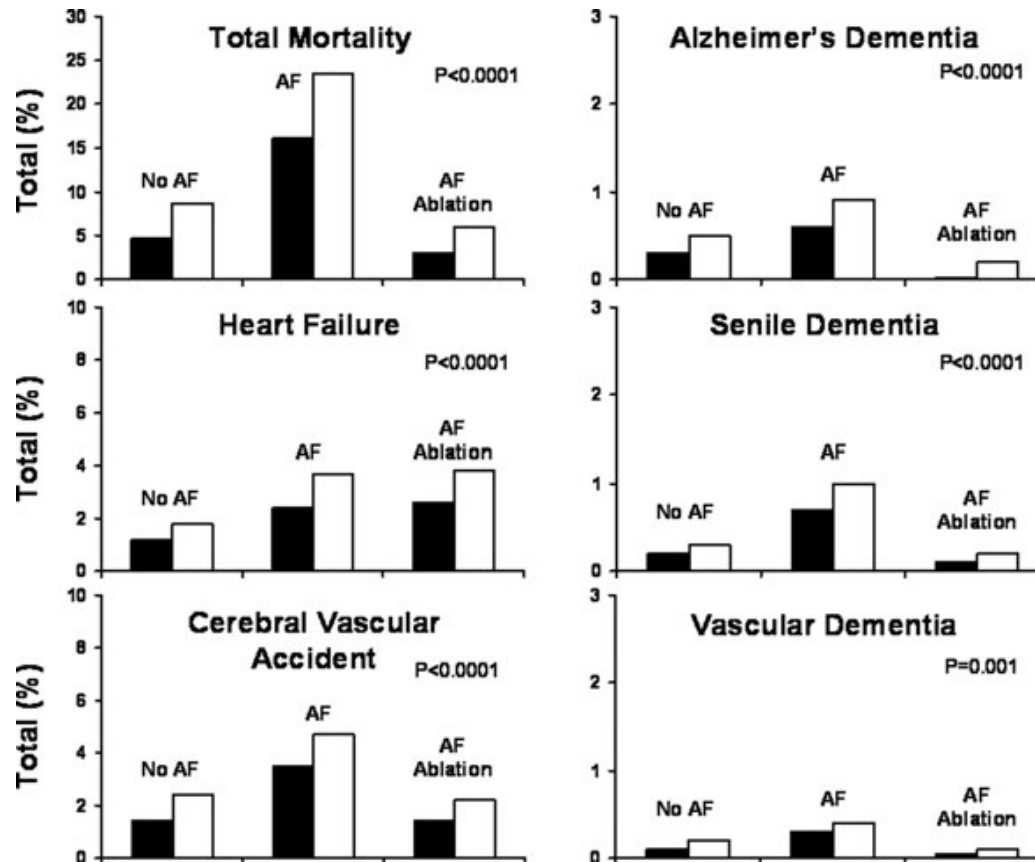
Intermountain study

- 37,908 pts follow up at least 3 yrs
- 4,212 ablation, 16,848 AF, 16,848 no AF
- Data from the intermountain hospital group online database

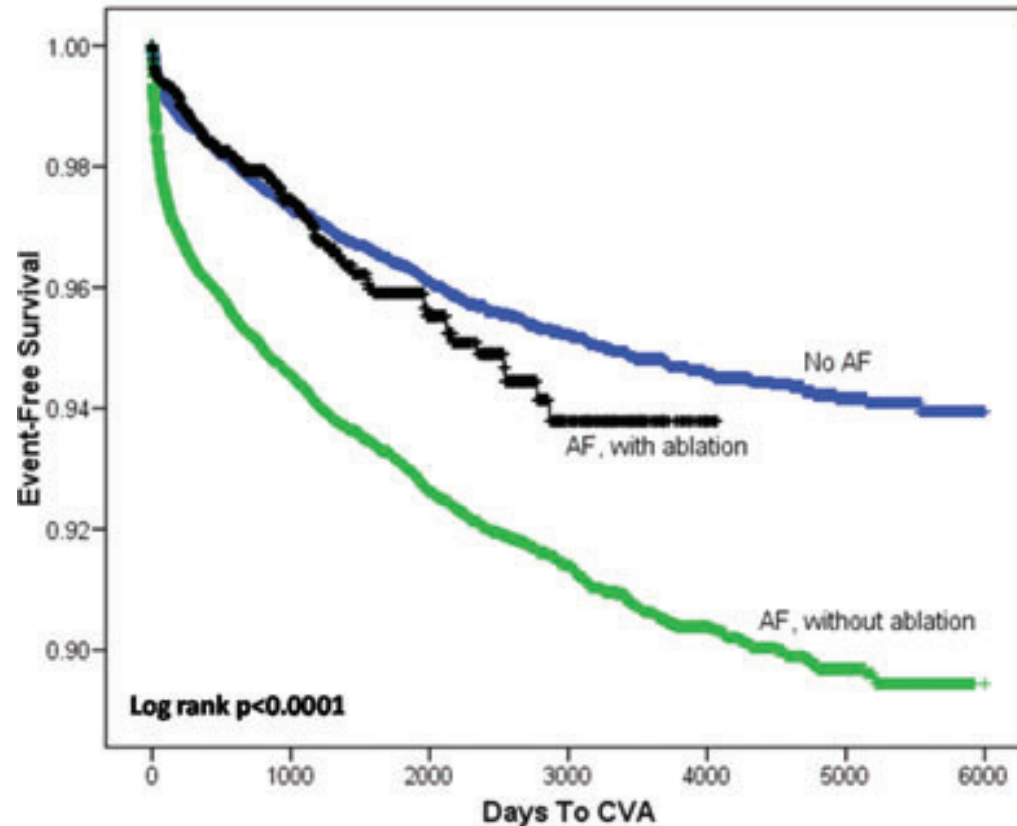


Prognosis after AF ablation

- n= 16,848 vs 16,848 vs 4,212



Ablation on stroke risk



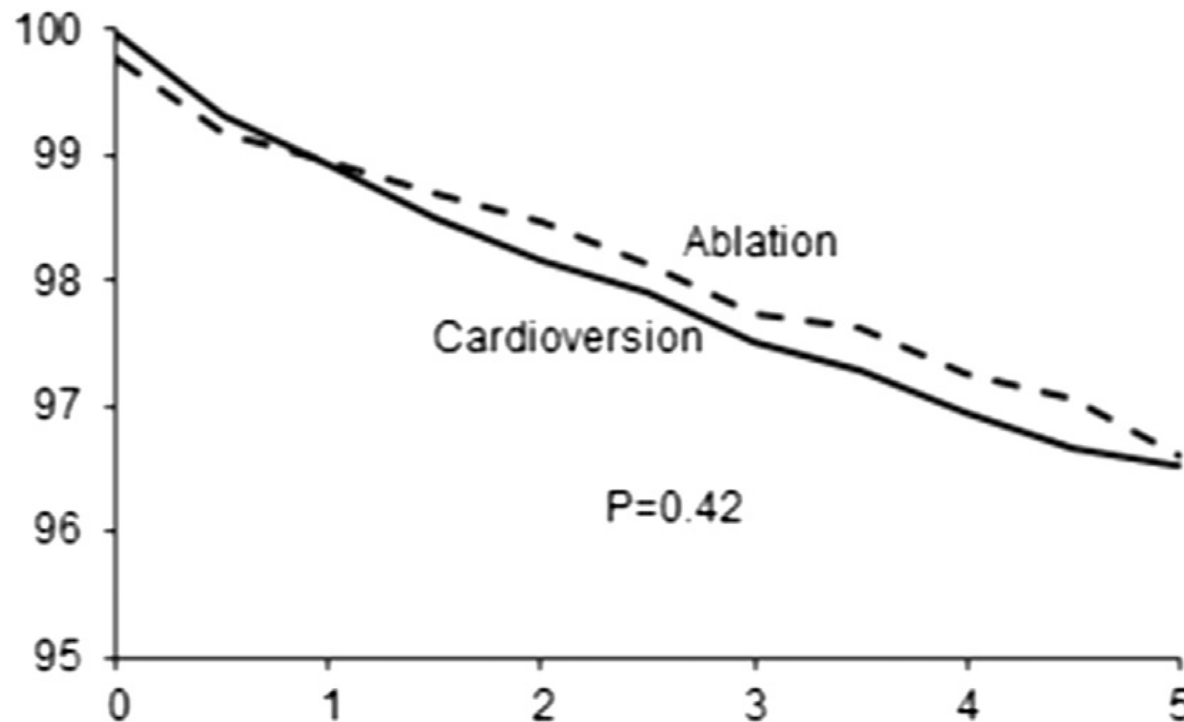
Prognosis after AF ablation

- Retrospective analysis of US data warehouse
- AF ablation between 2005 and 2012
- 12,122 ablation vs CVersion
- mean age 57.7yrs, mean CHADSVasc 1.5
- FU 2.4 yrs



Prognosis after AF ablation

- n= 24,244 ablation vs CVersion
- propensity matched

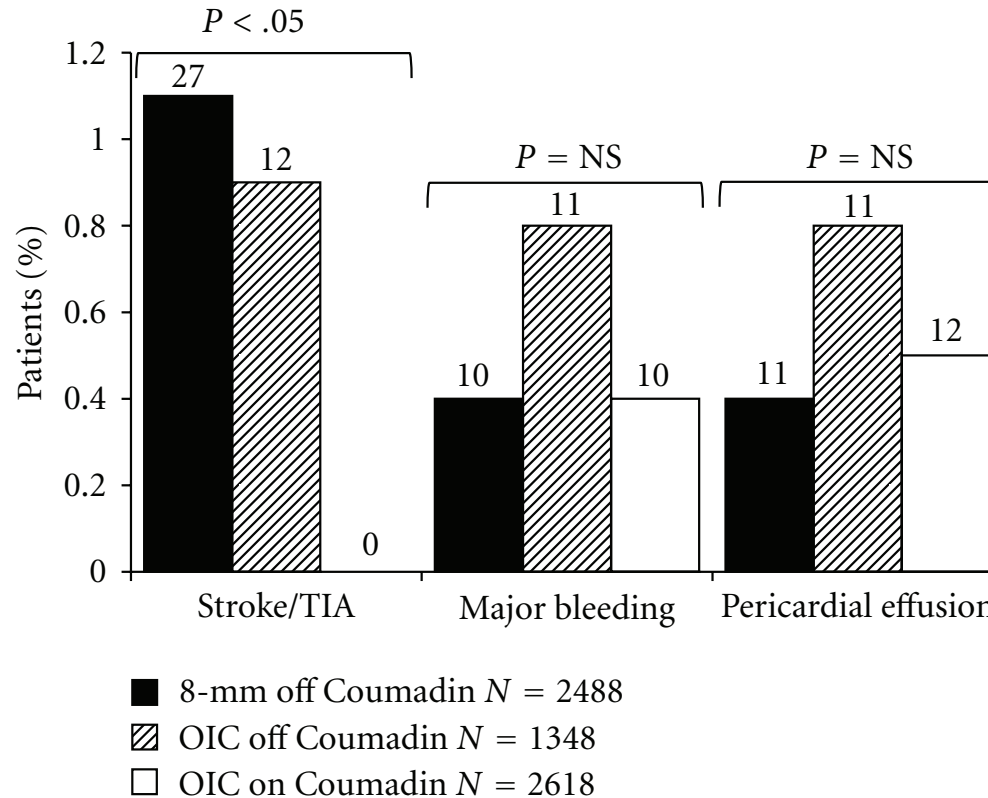


Problems with all these data

- Not randomised (baseline characteristics different for both studies)
- Uncertain AF type and duration
- Limited data on procedure and post-procedure management
- Almost all patients symptomatic



A note of caution



n=6454

uninterrupted OAC = no stroke



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Santangeli et al Cardiol res and practice 2011

Conclusion

- If I were to bet I would say yes
- If I had AF then I would chose ablation
- I would not take aspirin post ablation
- The data doesn't tell us the answer yet so RCT like CABANA and EAST are critical to answer this question

