Management of Atrial Fibrillation

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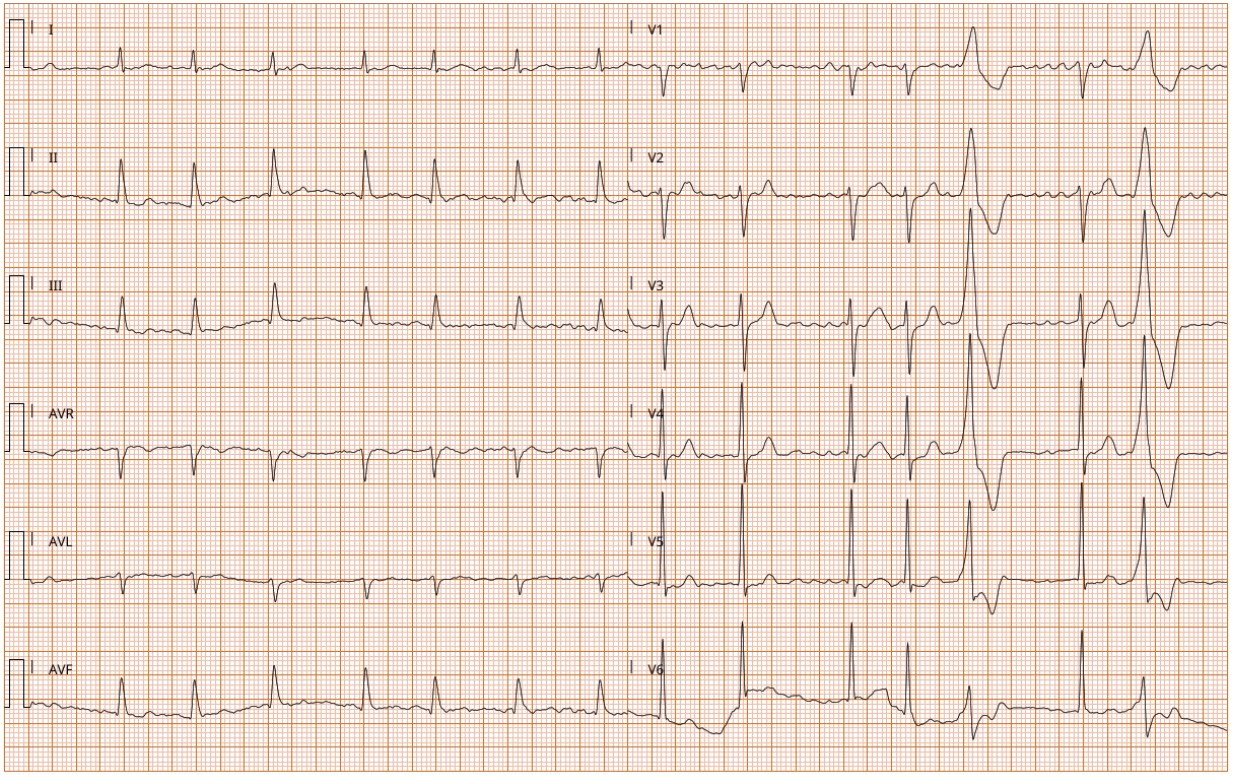
conflicts of interest

- None relevant to this talk

Case

- 65 yrs obese female irreg pulse at regular medical
- Asymptomatic



Three point plan for AF

- Stroke prevention
- Rate control
- Rhythm control

= prognostic benefit

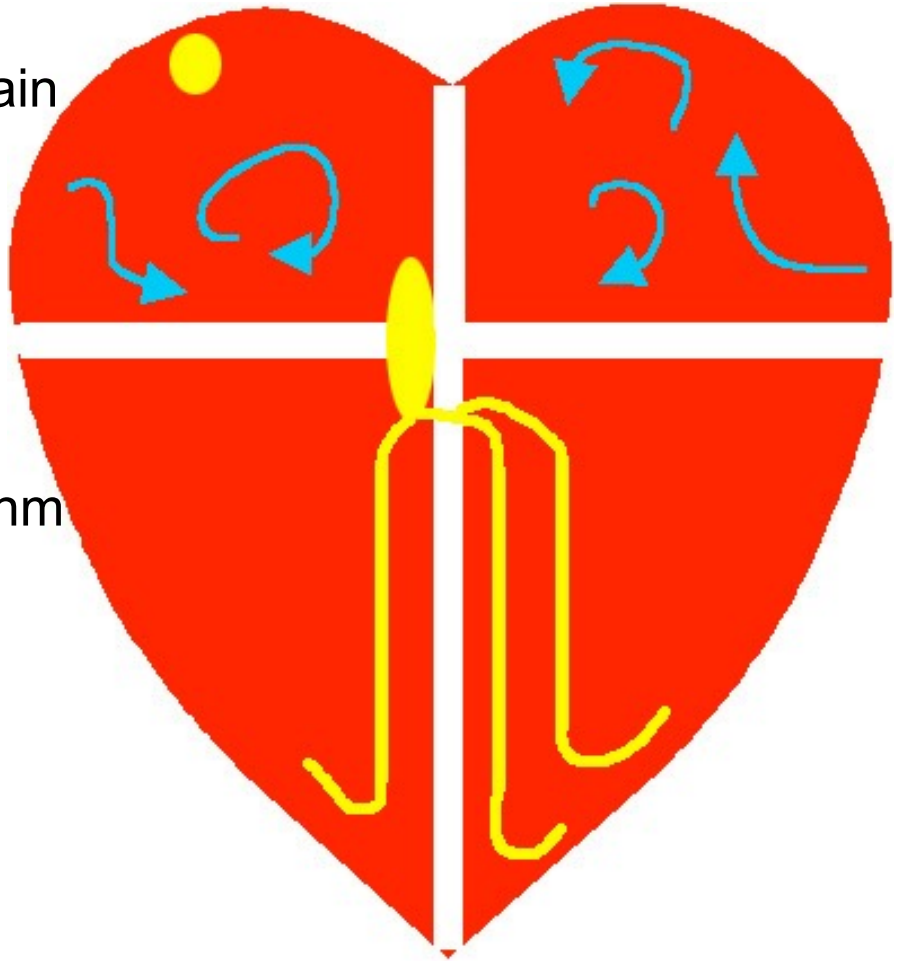
=?prognostic benefit

Camm et al EHJ 2010

AF mechanism

Key points that will help you explain AF

- The atria are minimally contractile hallways
- The AV node is a rate limiter
- Heart rate will reach 180 bpm during exercise in normal rhythm
- AF is associated with, not the cause of stroke - no evidence that getting rid of AF impacts stroke risk



Why do I have AF?

No causes, just factors:

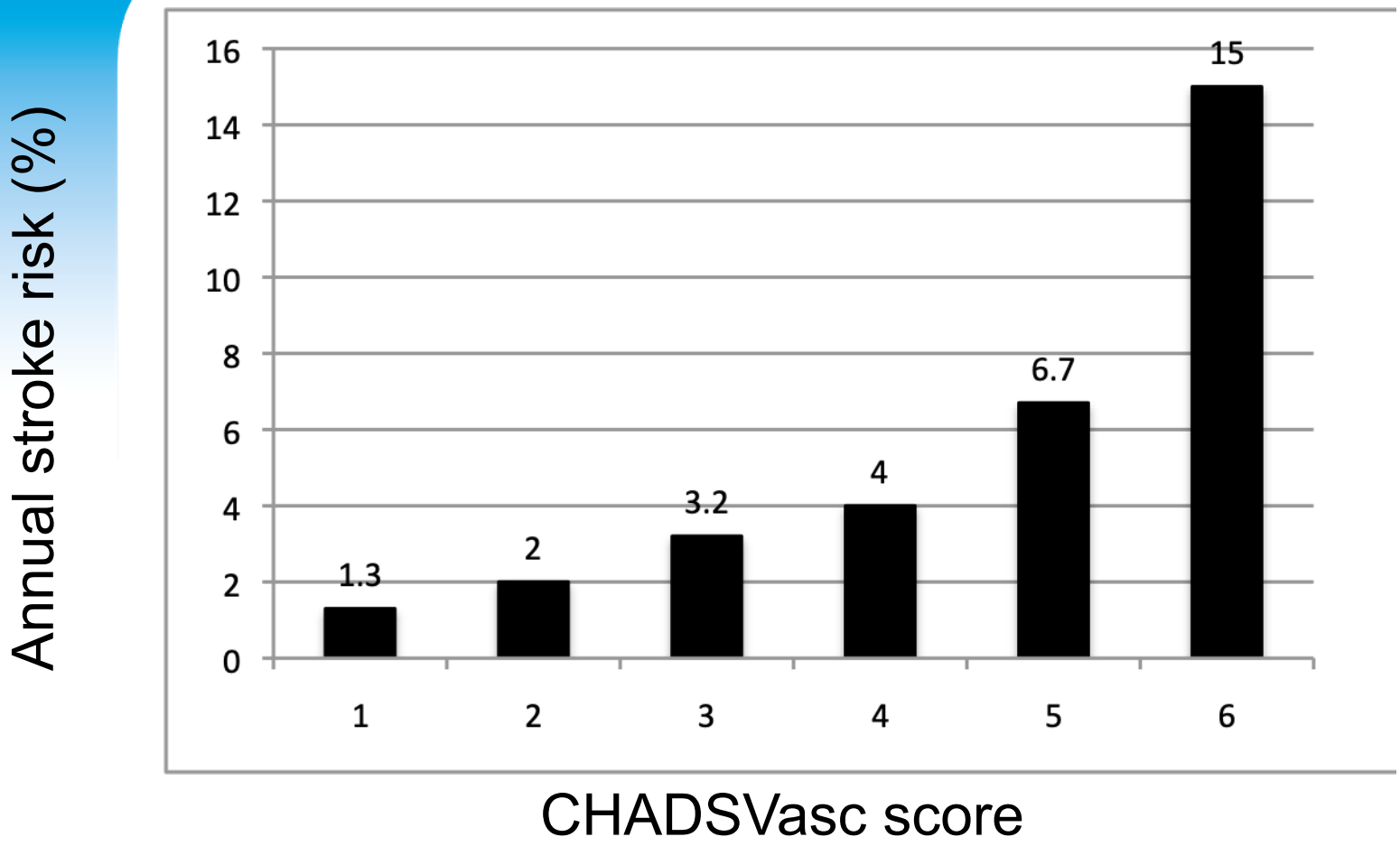
- Mammal heart design
- Genetics
- Age
- Weight
- Alcohol
- Exercise
- Not caffeine

1) Stroke - Is she at risk?

Risk factor	Score
Congestive heart failure/LV dysfunction	1
Hypertension	1
Age ≥75	2
Diabetes mellitus	1
Stroke/TIA/thrombo-embolism	2
Vascular disease[a]	1
Age 65–74	1
Sex category (i.e. female sex)	1
Maximum score	**9**

Camm et al EHJ 2010

Annual stroke risk per CHADSVasc score



DOACs have similar risk to aspirin

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)

Prevention of stroke

- Don’t bother with HASBled
- CHADSVasc>0 - I would
- CHADSVasc>1 - encourage
- DOAC - unless contraindication:
  - renal failure
  - extreme weight
  - extreme age

Data gaps in DOACs

- some groups underrepresented in trials:
  - Women
  - Extreme weight
  - Elderly (72yrs)

	%
Female	38
Obese	9.1

NOACs comparison

- Apixaban superior to dagibatran, rivaroxaban in some meta analysis (limited/no data on edoxaban)
- Compliance is an issue (BD vs OD)
- Rivaroxaban absorbed with food
- Edoxaban cheaper in some regions

2) Heart rate

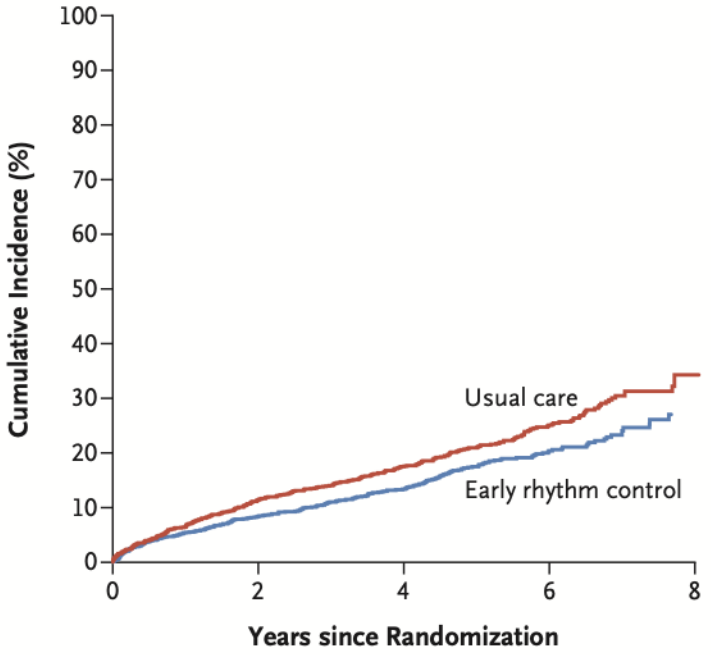
- Anything <110bpm on average is ok
- Check on ECG and confirm on Holter
- Options:
  - Bisoprolol - best but side effects
  - Adizem XL - start 120mg OD
  - Combinations of both

3) Rhythm control

- Conflicting evidence as to prognostic benefit
  - Original cardioversion/antiarrhythic drug trials - no benefit/harm
  - CABANA - positive for ablation but only when analysed by treatment
  - EAST - positive for rhythm control

Early rhythm control

- EAST:
  - 1395 rhythm
  - 1394 rate



No. at Risk					
Usual care	1394	1169	888	405	34
Early rhythm control	1395	1193	913	404	26

Figure 2. Aalen–Johansen Cumulative-Incidence Curves for the First Primary Outcome.

The first primary outcome was a composite of death from cardiovascular causes, stroke, or hospitalization with worsening of heart failure or acute coronary syndrome.

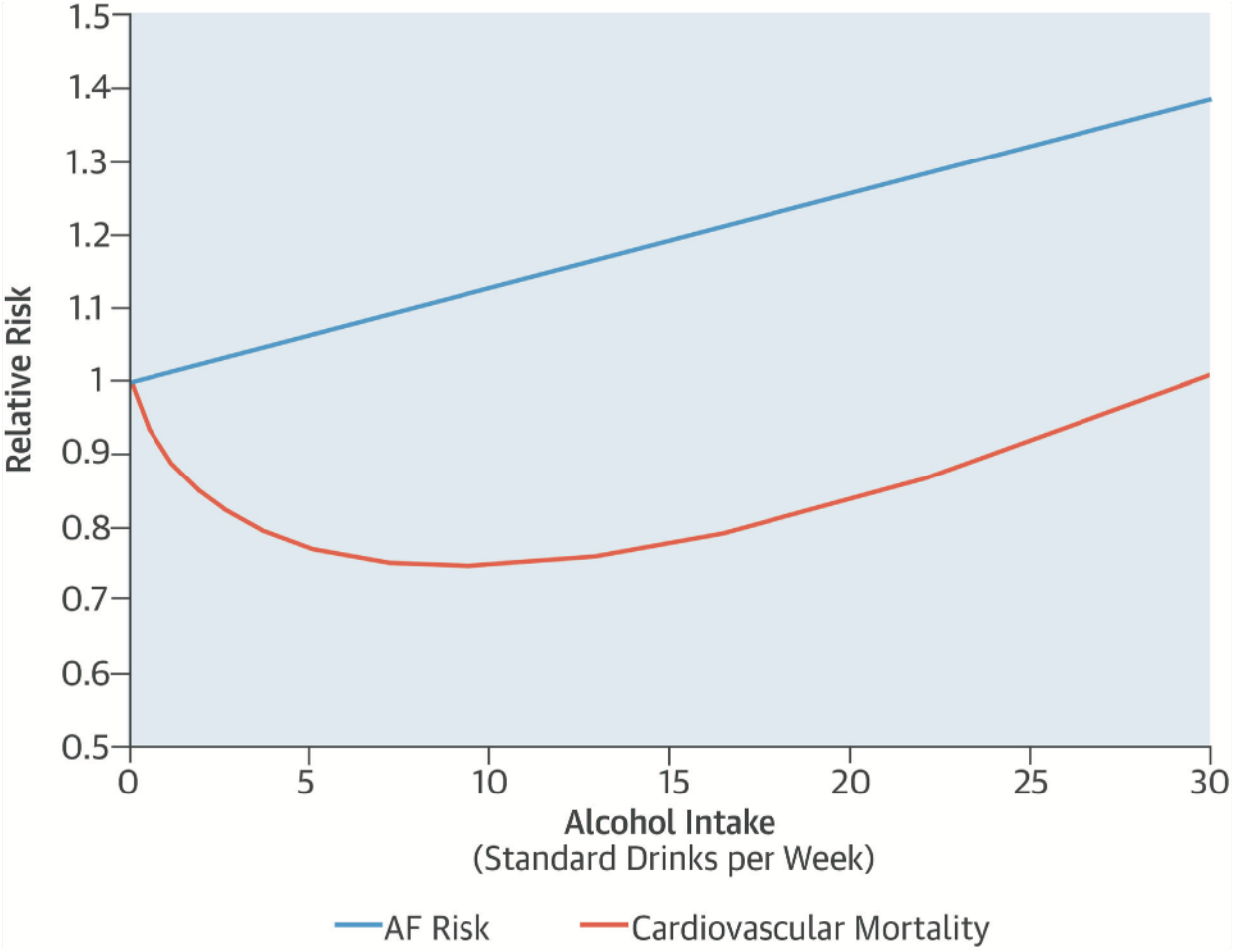
What do we do with our patient

- Stroke prevention - DOAC?
- Rate control (if heart rate >110 bpm)
- Rhythm control ?
  - Is she really asymptomatic - cardioversion
  - If not, is long term rhythm control her wish?
    - risk factor reduction (weight, alcohol, exercise)
    - long term antiarrhythmic drugs
    - catheter ablation

Factors promoting AF

- Age
- Genetics
- Mammalian design
- Hypertension
- Alcohol
- Obesity
- Fitness

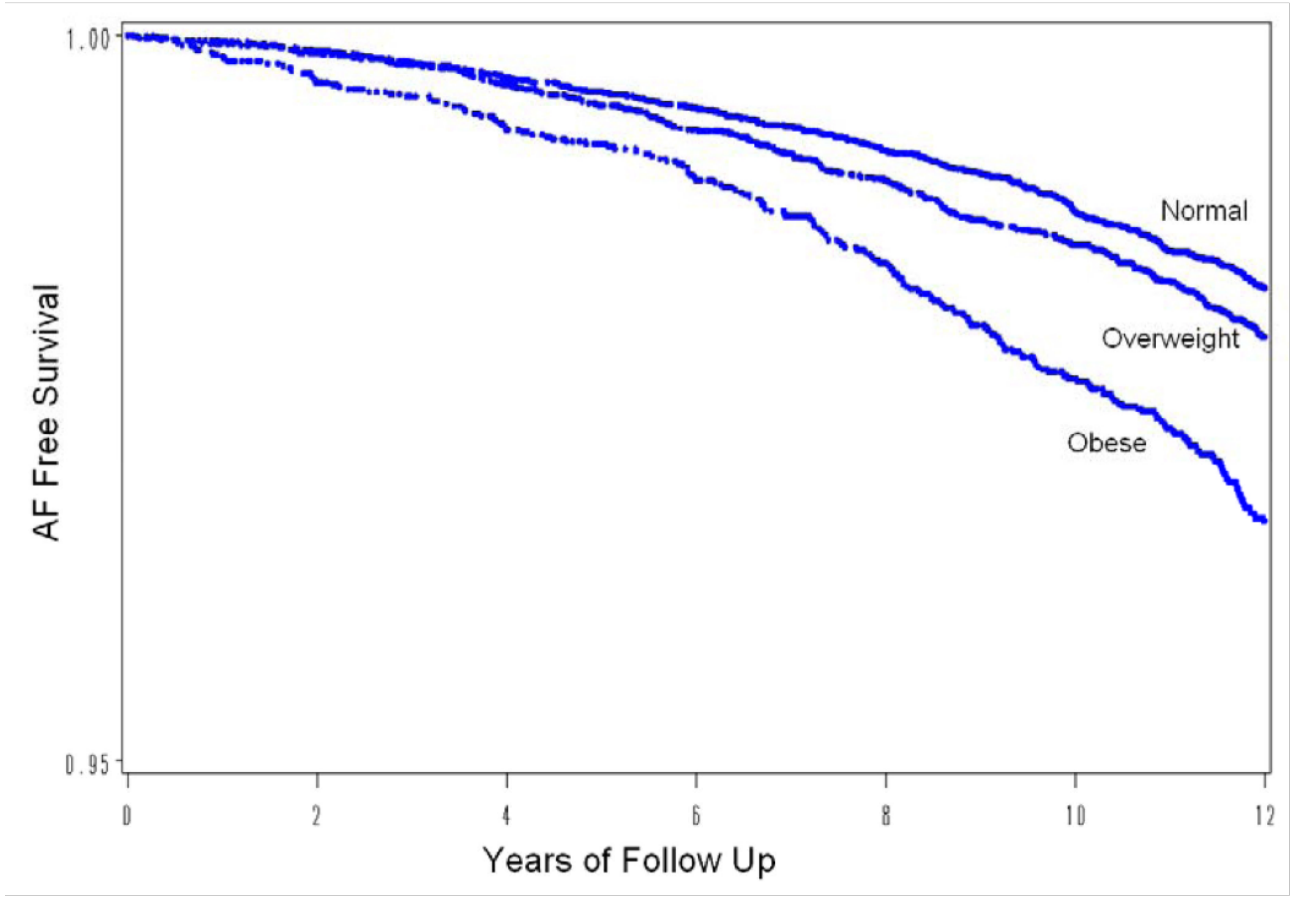
Alcohol and AF



Voskoboinik et al JACC 2016

Obesity and AF

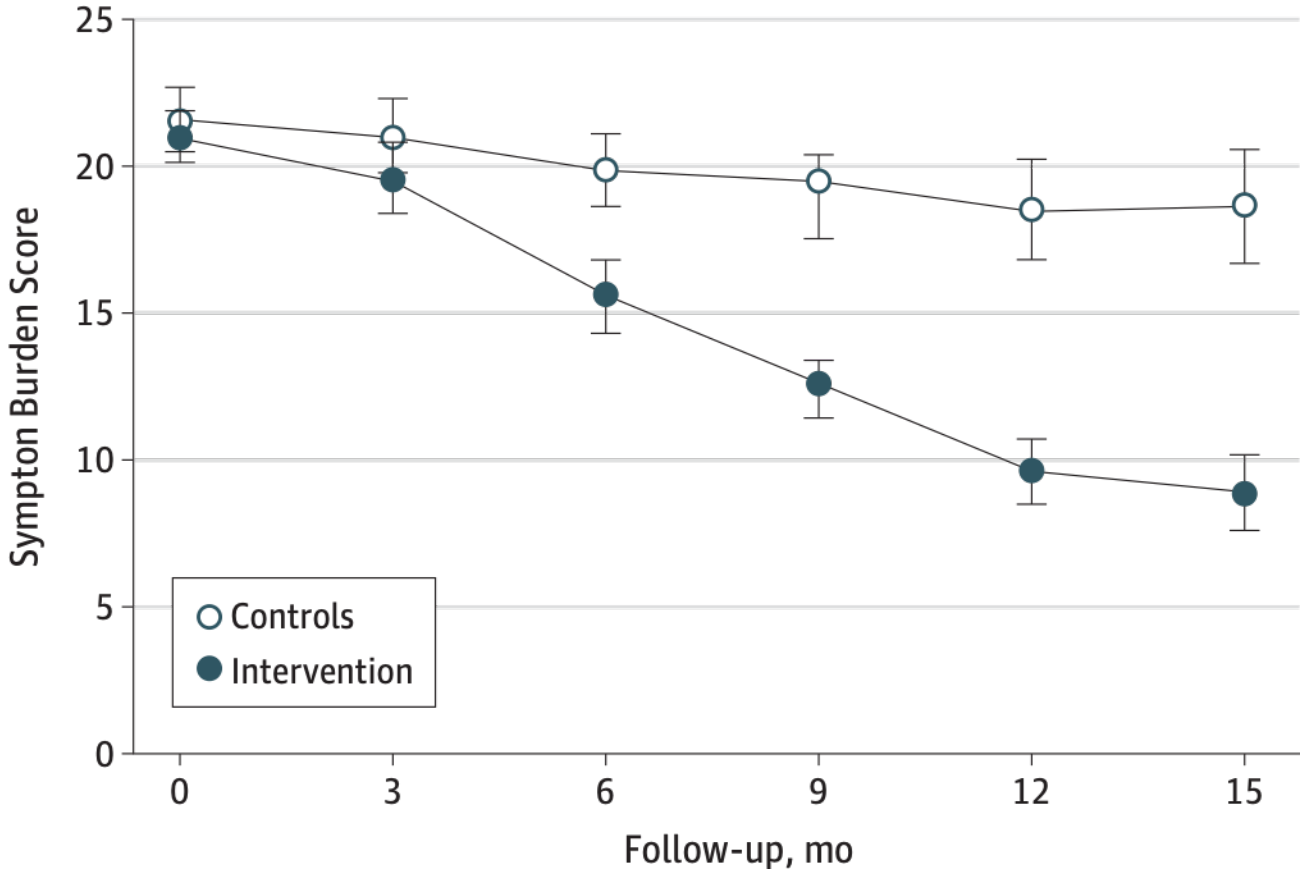
- Womens health study - 34,309 participants with 834 AF events



Tedrow et al JAMA 2010

Effect of intervention on AF

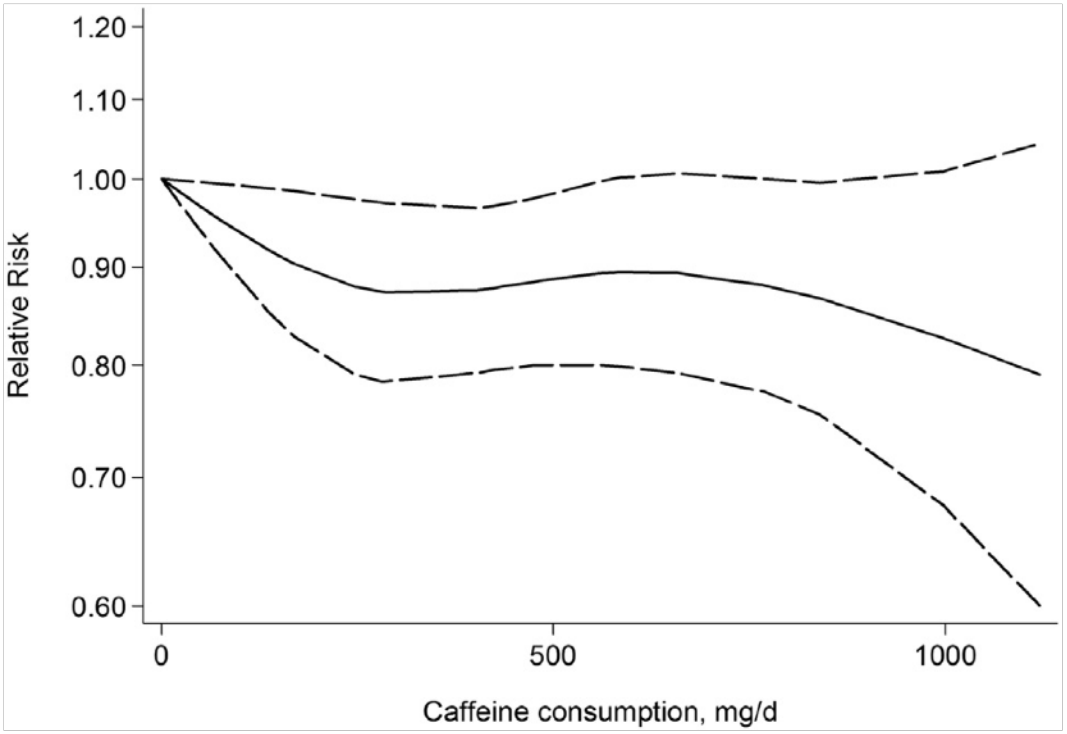
- 178 pts BMI >27 randomised to intervention vs control



Abed et al JAMA 2013

Caffeine and AF

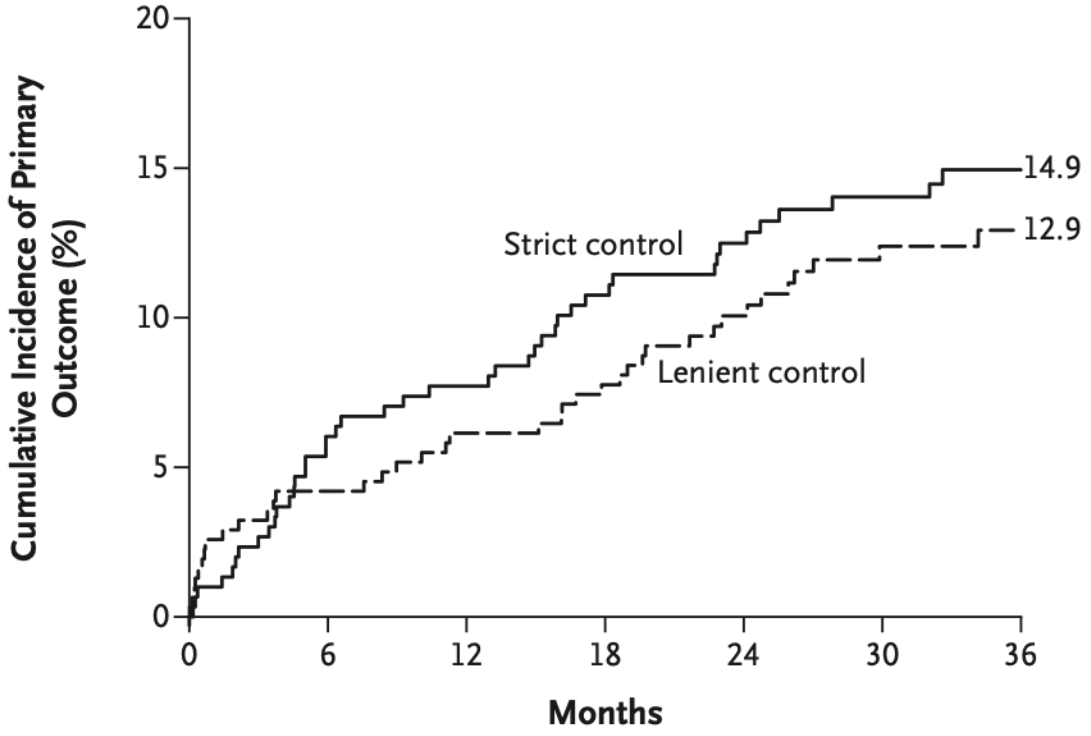
- Meta analysis 6 studies, 228,465 pts



Cheng et al Can J Cardiol 2014

Rate control

- Strict rate control has no advantage over lenient



No. at Risk							
Strict control	303	282	273	262	246	212	131
Lenient control	311	298	290	285	255	218	138

Van Gelder et al NEJM 2010

Step 2 Rate control

- A lenient heart rate control strategy is acceptable (resting HR<110) if asymptomatic
- Drugs of choice
  1. Beta-blockers
  2. Calcium channel blocker
  3. Both
  4. Digoxin

Step 2 Rate control

- Exceptions:
  - Reversible cause of AF
  - Heart Failure and AF
  - Acute onset AF (A+E)

Step 3 Rhythm control

- Drug therapy
  - Normal heart - Flecainide
  - IHD - Sotalol
  - Structural heart disease - Dronedarone/Amiodarone
  - Heart failure - Amiodarone

DC cardioversion

- At 1 year:
  - AF recurs 75% without antiarrhythmic
  - 40% with best antiarrhythmic (amiodarone)
- NICE - amiodarone 4 weeks and 12 months post CVersion

useful info

- https://www.ncl-mon.nhs.uk/wp-content/uploads/9_DOAC_prescribing_support.pdf - search north central london doc
- LondonAFcentre.com

Conclusion

- Patients make the choice

1. Stroke prevention based on CHADSVasc score not symptoms or AF type
2. Rate +/- Rhythm control
3. If rhythm - stroke prevention continues:
   - Drugs (pill in pocket/regular meds)
   - Cardioversion and AAD for life
   - Catheter ablation