Screening for AF - Larger outcome studies

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Disclosures Mårten Rosenqvist

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AF screening – What do we know so far?

- Many different and feasible methods to detect AF are available
- The more we look, the more we find (1.5 % - 5% - 25%)
- High acceptance and compliance to OAC
- No obvious harm caused by screening!
- Opportunistic screening higher take-up than population screening

AF – screening what is it we do not know (but must know?)

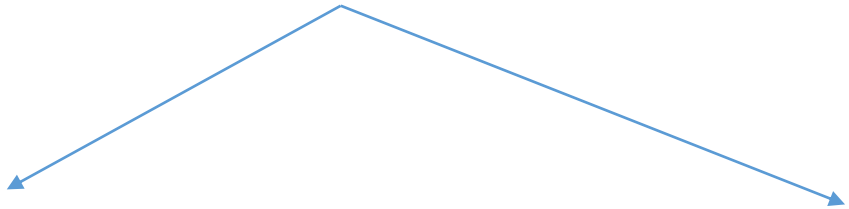
- **Can OAC treatment of screening detected AF, in risk groups, reduce the incidence of stroke?**

- **Hard endpoints are missing!**

Clintrial.gov

- Key words: Atrial fibrillation, screening/detection

Hits N = 309

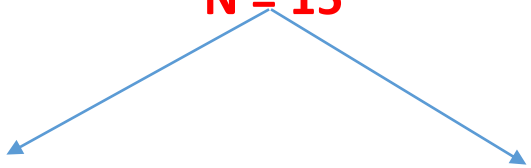


Stroke **not** an outcome

N = 294

Stroke as an outcome

N = 15



Secondary end point
N = 9

Primary endpoint
N = 6

Studies with Stroke as secondary endpoint
N = 10

- Screen AF n= 822
- Vital AF n= 35 000
- PIAAF –FP n= 2174
- AFOSS n= 51 000
- Hong-Kong Outpatient n=500
- mSToPs n= 2224
- IDEAL n= 16000

Electronic alert 1 n= 400

Detect AF n=1600

Electronic alert 2 n= 1000

Large (>1500) randomized outcome studies with stroke as secondary end-point

n = 4

- VITAL
- Rx to intensive screening vs routine
- Single ECG at office visits
- N= 35000
- Primary endpoint: Incident AF during screening
- Recruiting (august 2018)

Large randomized outcome studies (n> 2000), stroke as secondary endpoint

- **AFOSS**
- Observational, opportunistic vs standarc care
- Pulse palpation and ECG
- N= 51000
- Primary endpoint: New diagnosis of AF
- Active, not recruiting (July 2018)

Large randomized outcome studies with stroke as secondary endpoint

- **mSTOPs**
- Randomized early versus late monitoring
- Patch sensor
- n = 2224
- Active, not recruiting (July 2018)
- Primary end-point: New diagnosis of AF

Large outcoms studies with stroke as secondary end-point

- **Ideal MD**
- Randomized opportunistc vs standard
- Single ECG
- N = 16 000
- Primary end-point: Newly detcted AF
- Completed (july 2018)

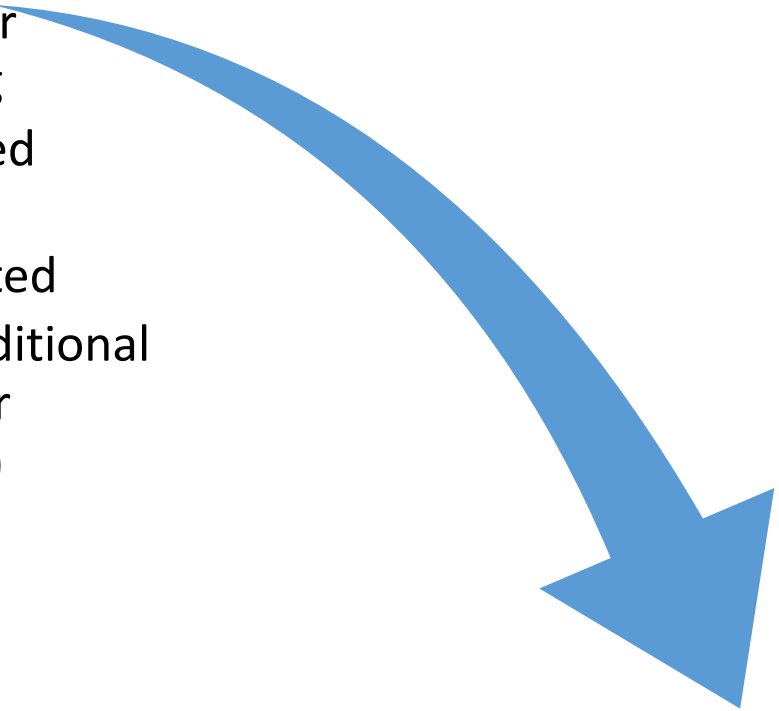
AF screening with stroke as a primary outcome N = 6

• Strokestop Pilot	Published Europace 2018
• Strokestop 1	Recruitment completed, awaiting follow-up
• Strokestop 2	Recruitment completed, awaiting follow-up
• Danish Loop Study	Recruitment complted, awaiting follow up
• Safer	Planning phase
• Detection AF	Not yet recruiting

STROKESTOP pilot study

Halmstadproject

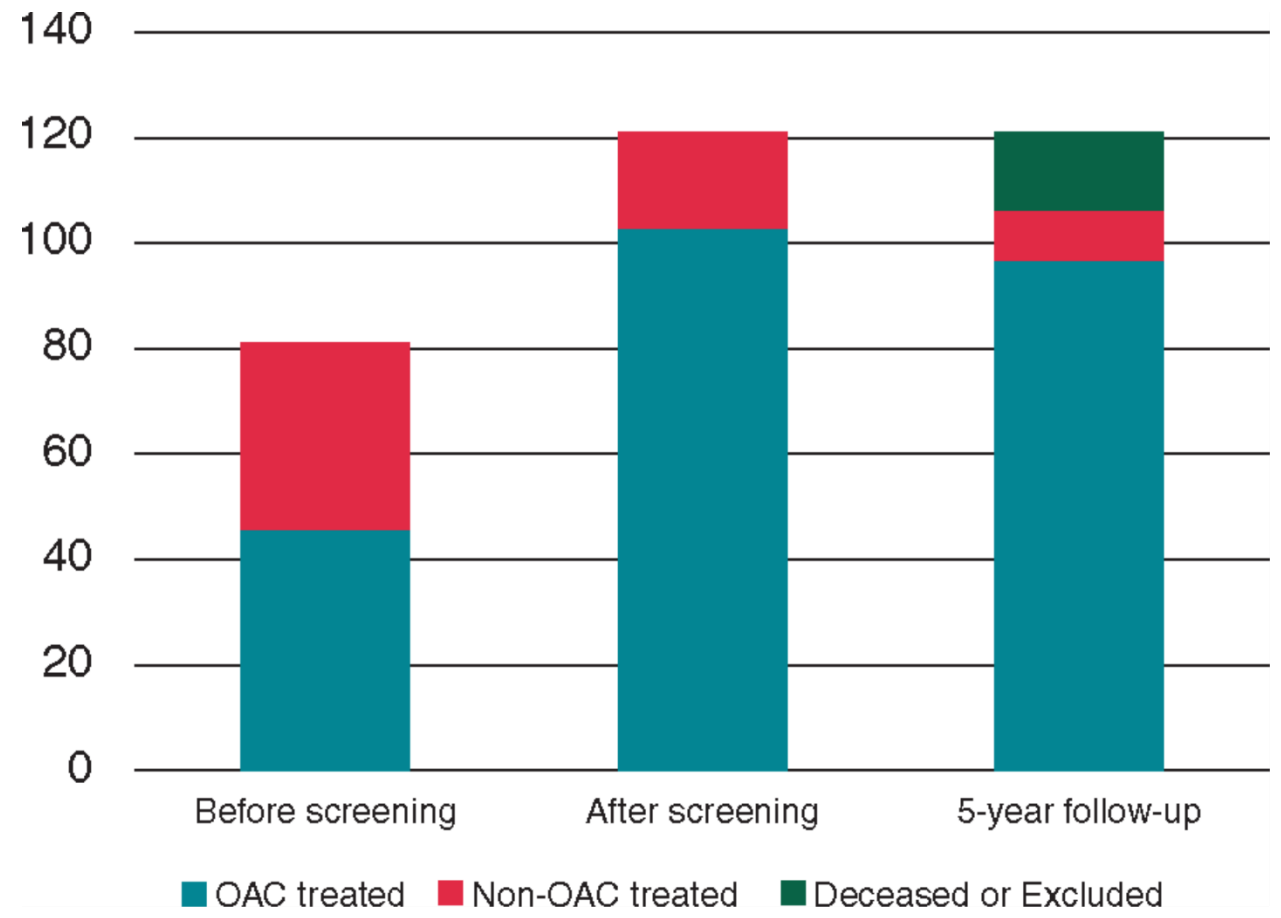
- All 75-76 yrs invited for screening
- 948 invited
- 65% participated
- If one additional risk factor (CHADS2)



8% AF and candidates for OAC treatment

intermittent ECG
14 days 30 sec x 2

(Engdahl et al Circulation 2013)



From: A prospective 5-year follow-up after population-based systematic screening for atrial fibrillation

Europace. Published online April 24, 2018. doi:10.1093/europace/euy045

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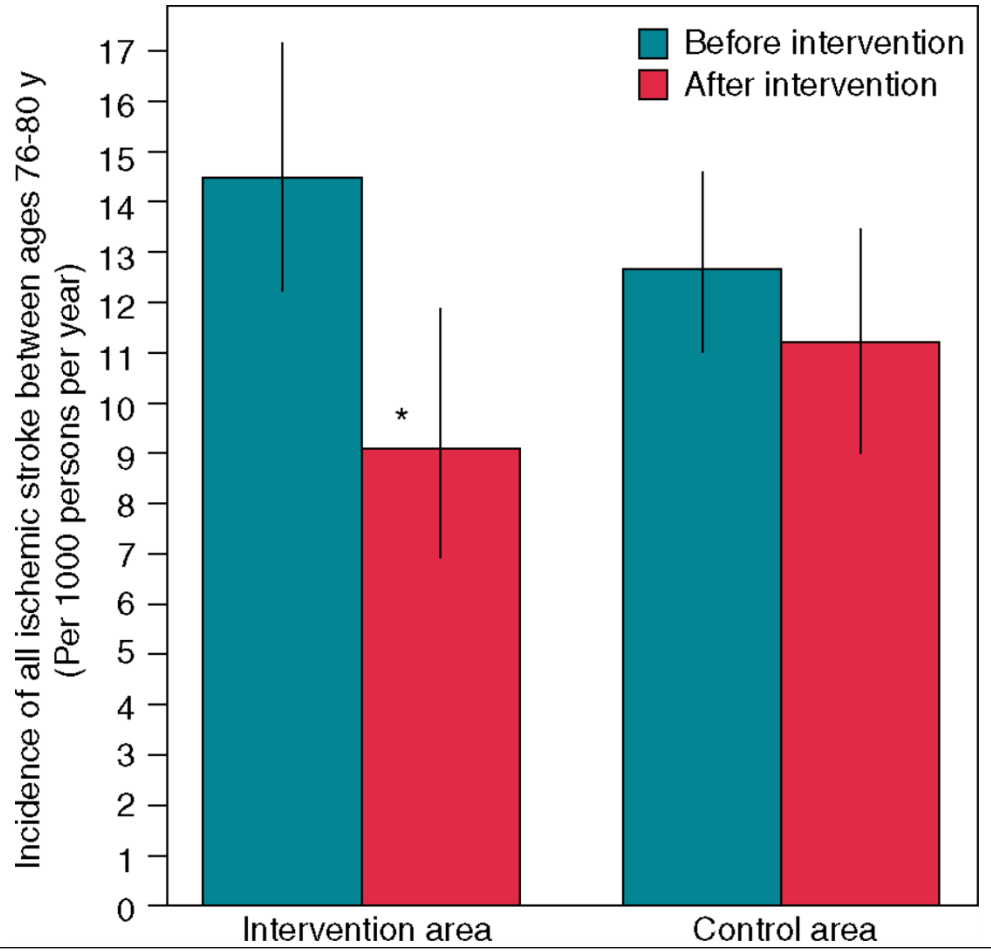
Five year follow-up in Stroke Stop Pilot Study (Engdahl et al Europace 2018)



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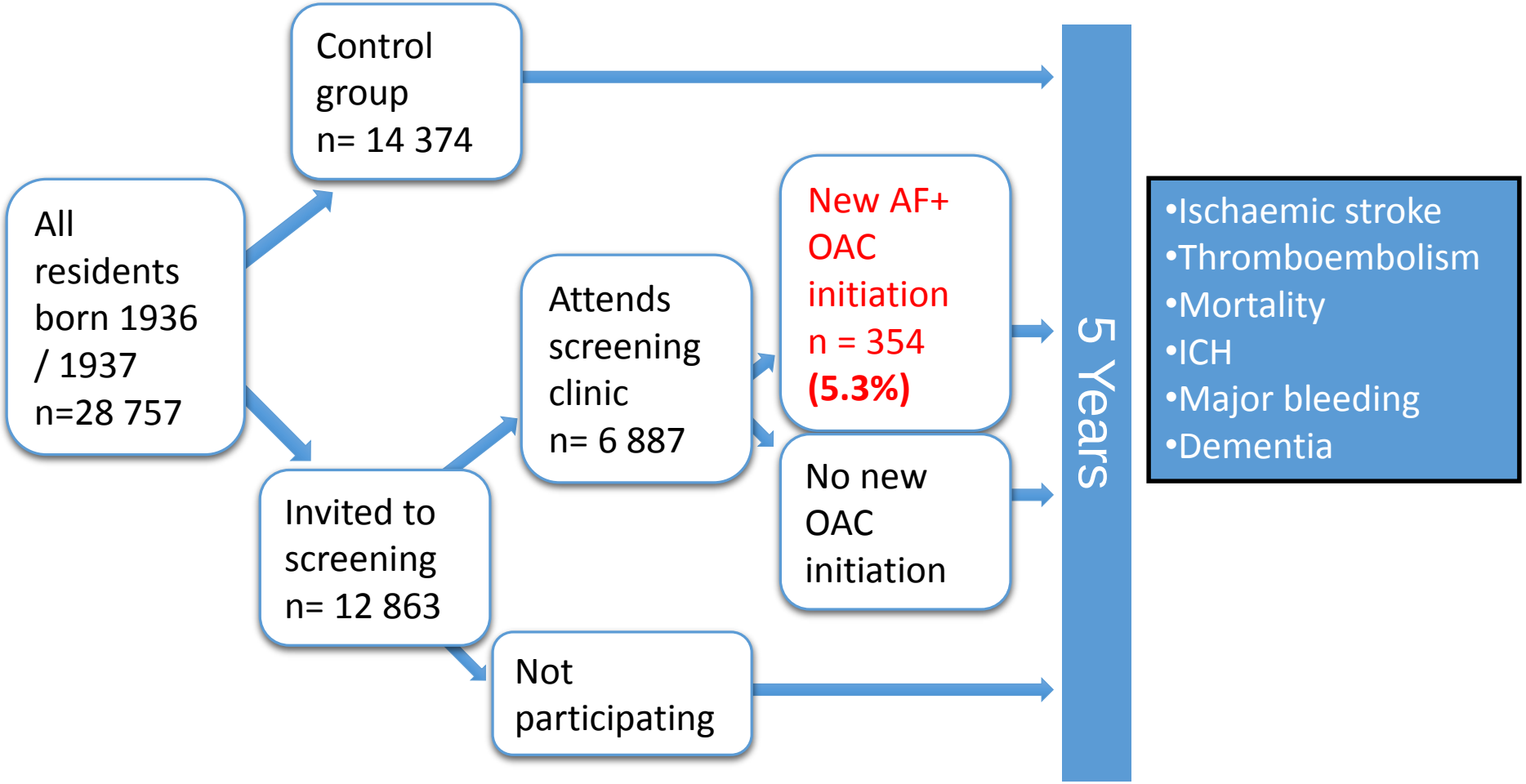
”STROKESTOP I” study

- 28 757 individuals 75-76 yrs randomised for AF screening or no intervention
- Resting ECG and history
- If SR, Hand-held ECG 14 days, 2 x 30 sec.
- When AF is detected: Treatment with OAC

(Svennberg et al Circulation 2015)



Svennberg et al, Circulation 2015

Prespecified Interim analysis January 2018

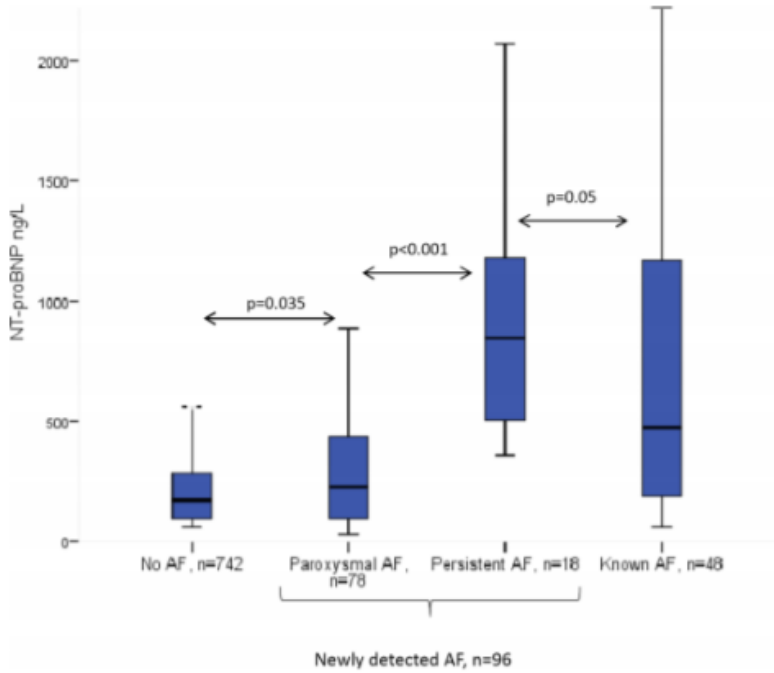
1. Initiation of OAC – No safety problems.

2. Continued follow-up until all patients been followed for 5 years (2019)

STROKESTOP II - Background

Systematic ECG screening may be considered to detect AF in patients aged >75 years, or those at high stroke risk.	IIb	B	130,135, 157

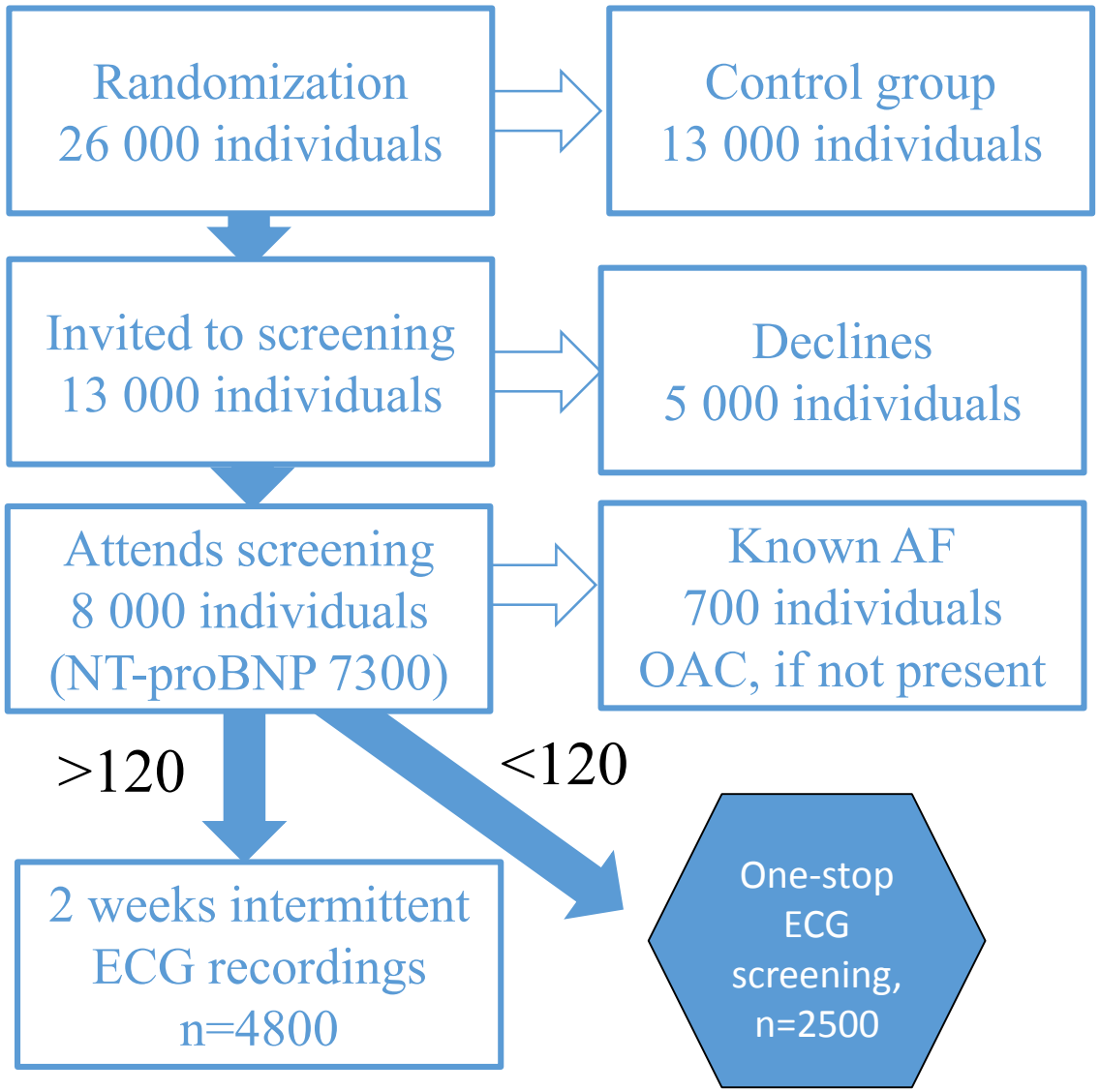
ESC guidelines 2016



(Svennberg Circulation 2015)

Aim: To study the yield of AF screening in a high risk population with NT-proBNP enrichment

Method



5-year follow-up

8686 patients included for screening.

Data to be presented

Sunday August 26, 12:03

Agora 2

5 year follow 2023

The Danish Loop study (as of June 14, 2018)

- Inclusion : At least 70 years and DM/HT/CHF/ stroke
- Rx 1:3 Loop recorder vs control (1500 ILR vs 4500 controls)
- At least 3 years of follow-up
- AF defined as continous AF for at least 6 minutes
- If AF , OAC is started
- F-Up until March 2019
- Primary end-point: Stroke + peripheral emboli
- Inclusion completed May 2016

Large randomized studies with stroke as primary end-point

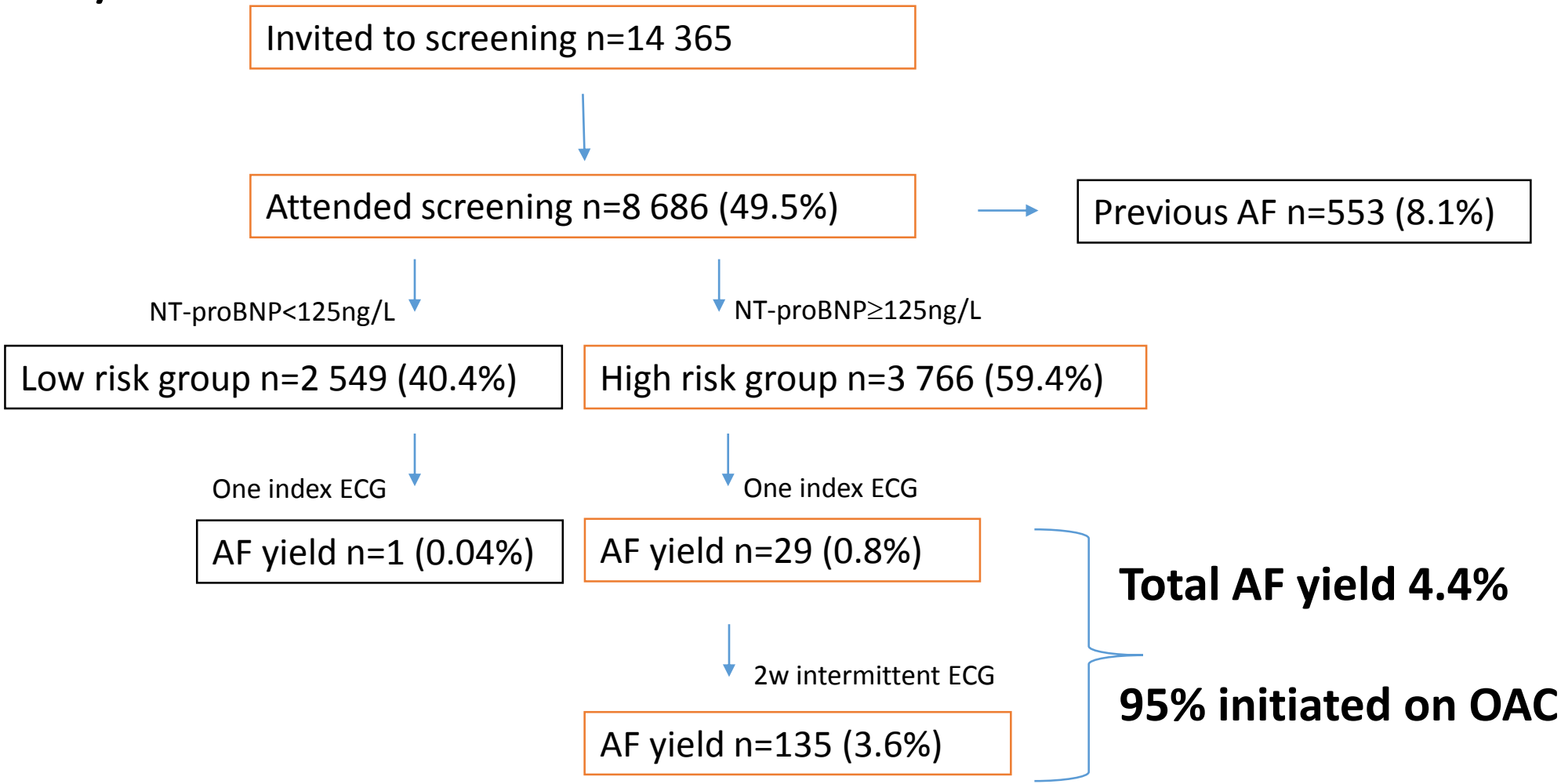
- **Detection AF**
- Rx screening vs screening
- In-hospital risk patients
- Intermitten ECG
- N = 1600
- Five year follow-up
- Not recruiting (as june 2017)

The Safer Study

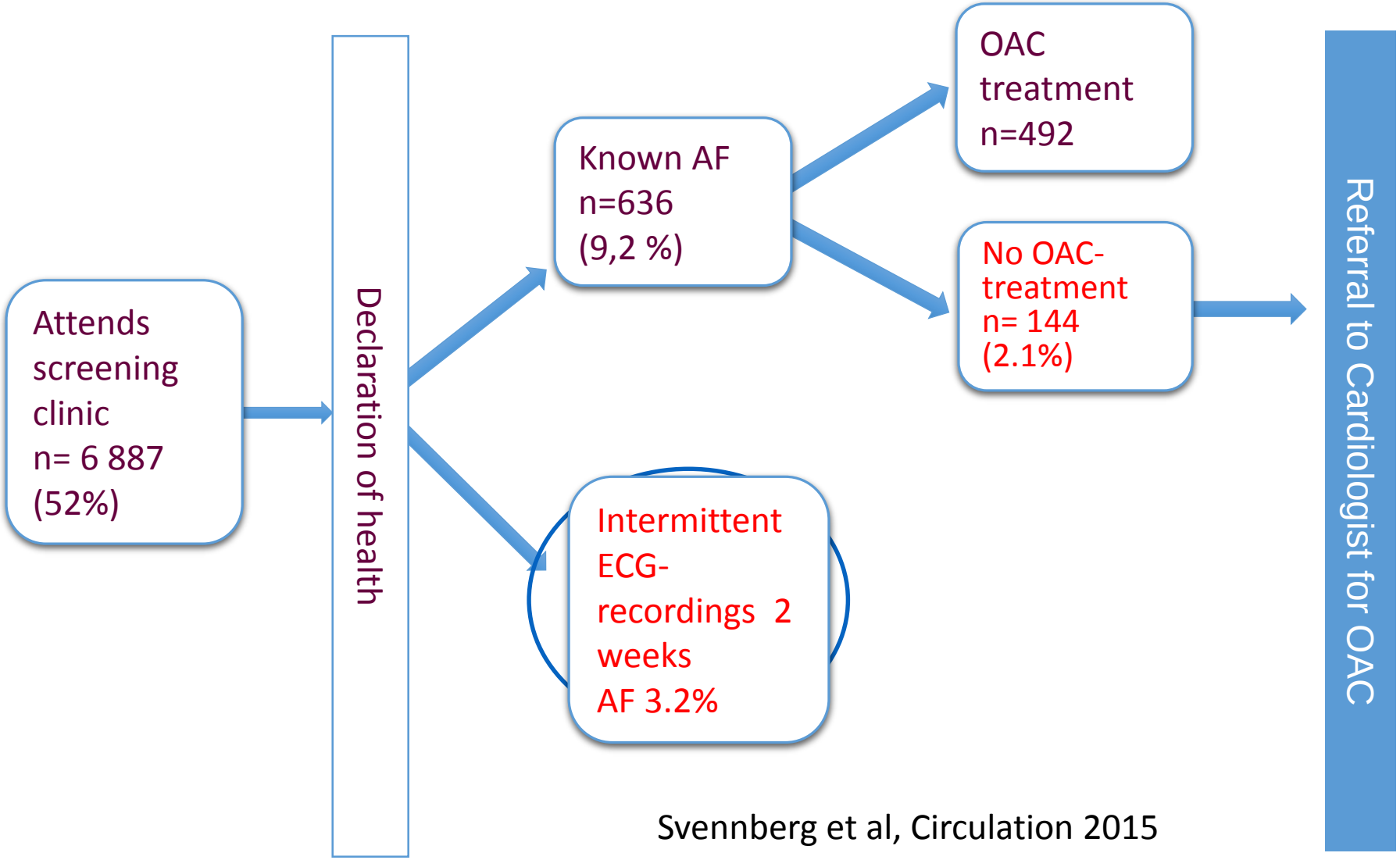
Conclusion

- Outcome studies with stroke as primary endpoint are urgently needed to verify whether AF screening is a cost-effective method to decrese the incidence of stroke

Methods/Results



Results



Svennberg et al, Circulation 2015

Halmstad project

Results

Known AF – No OAC treatment	3 %
Resting ECG – New AF	1%
Intermittent ECG – New AF	4 %

Totally, 8% candidates for oral anticoagulation treatment

(Engdahl et al Circulation 2013)