

Debatní sekce – máme pochybnosti ve světle současných doporučení léčby FS?

## Ablace FS a mortalita – kritická analýza studie CABANA

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# CABANA design

Nově zachycená nebo nedostatečně  
léčená FS jakéhokoli typu

&

alespoň jeden faktor  $\text{CHA}_2\text{DS}_2$

- Srdeční selhání
- Hypertenze s HLK
- Věk >65 let
- Diabetes
- CMP /TIA
- $\text{LAd} >50\text{mm}$  nebo  $\text{LAVi} >40 \text{ ml/m}^2$

R  
A  
N  
D  
O  
M  
I  
Z  
A  
C  
E

1:1

Ablace: PVI (+ ???)

Léky:  
kontrola rytmu  
nebo frekvence

## POROVNÁNÍ

- Klinické endpointy včetně komplikací léčby
- Výskyt arytmií
- Symptomy
- Kvalita života

Packer DL et al.  
American Heart Journal 2018; 199: 192-9

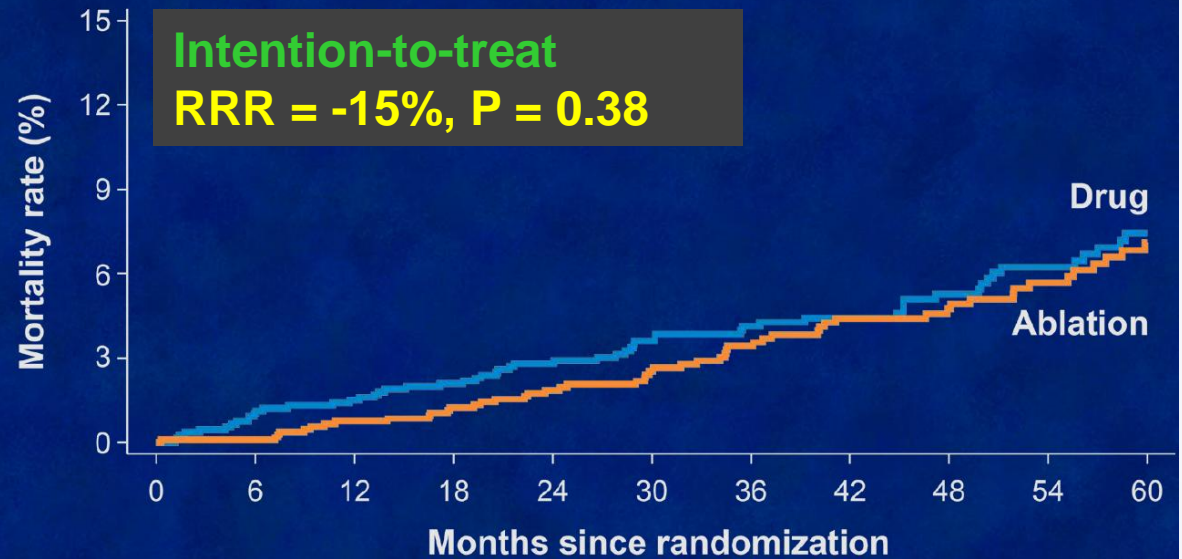
# CABANA – major endpoints

All-cause death

Primary endpoint



Secondary endpoint



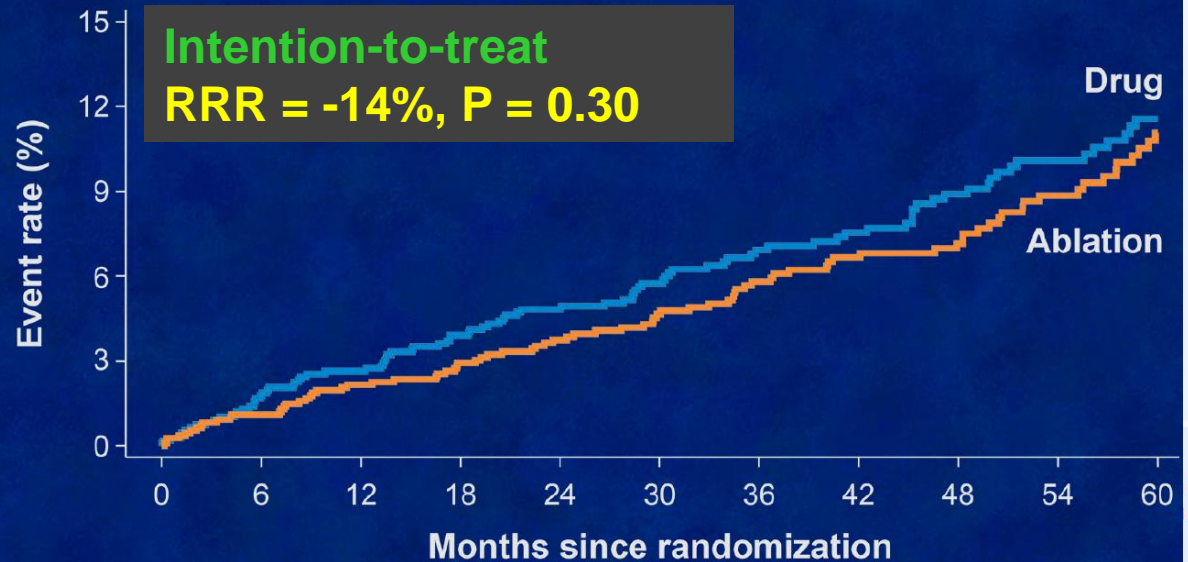
Composite endpoint

- death
- disabling stroke
- serious bleeding
- cardiac arrest

Primary endpoint



Secondary endpoint



# CABANA – primary composite endpoint (ITT)

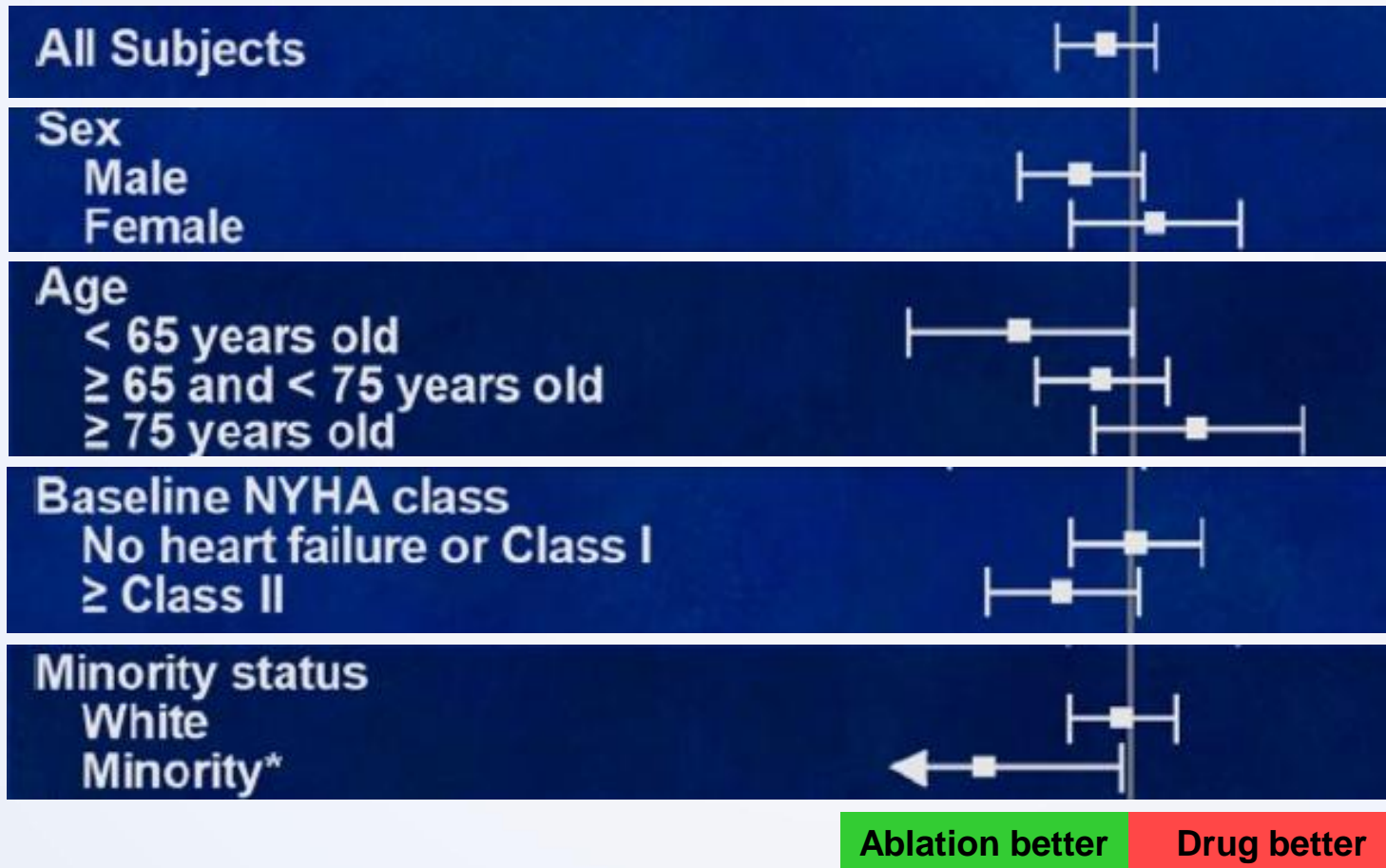
|                        | Ablation<br>N = 1108 | Drug<br>N = 1096 | Hazard Ratio<br>(95% CI) | P-<br>Value |
|------------------------|----------------------|------------------|--------------------------|-------------|
| <b>Primary Outcome</b> |                      |                  |                          |             |
| <b>Composite:</b>      | 89 (8.0%)            | 101 (9.2%)       | 0.86 (0.65, 1.15)        | 0.30        |
| Death                  | 58 (5.2%)            | 67 (6.1%)        | 0.85 (0.60, 1.21)        | 0.38        |
| Disabling stroke       | 3 (0.3%)             | 7 (0.6%)         | 0.42 (0.11, 1.62)        | 0.19        |
| Serious bleeding       | 36 (3.2%)            | 36 (3.3%)        | 0.98 (0.62, 1.56)        | 0.93        |
| Cardiac arrest         | 7 (0.6%)             | 11 (1.0%)        | 0.62 (0.24, 1.61)        | 0.33        |

## Pokles rizika u pacientů v ablační větvi

|                  | Absolutní pokles | Relativní pokles | P           |
|------------------|------------------|------------------|-------------|
| <b>COMPOSITE</b> | <b>-1.2%</b>     | <b>-14%</b>      | <b>0.38</b> |
| Death            | -0.9%            | -15%             | 0.38        |
| Disabling stroke | -0.4%            | -58%             | 0.19        |
| Serious bleeding | 0.0%             | -2%              | 0.93        |
| Cardiac arrest   | -0.4%            | -38%             | 0.33        |

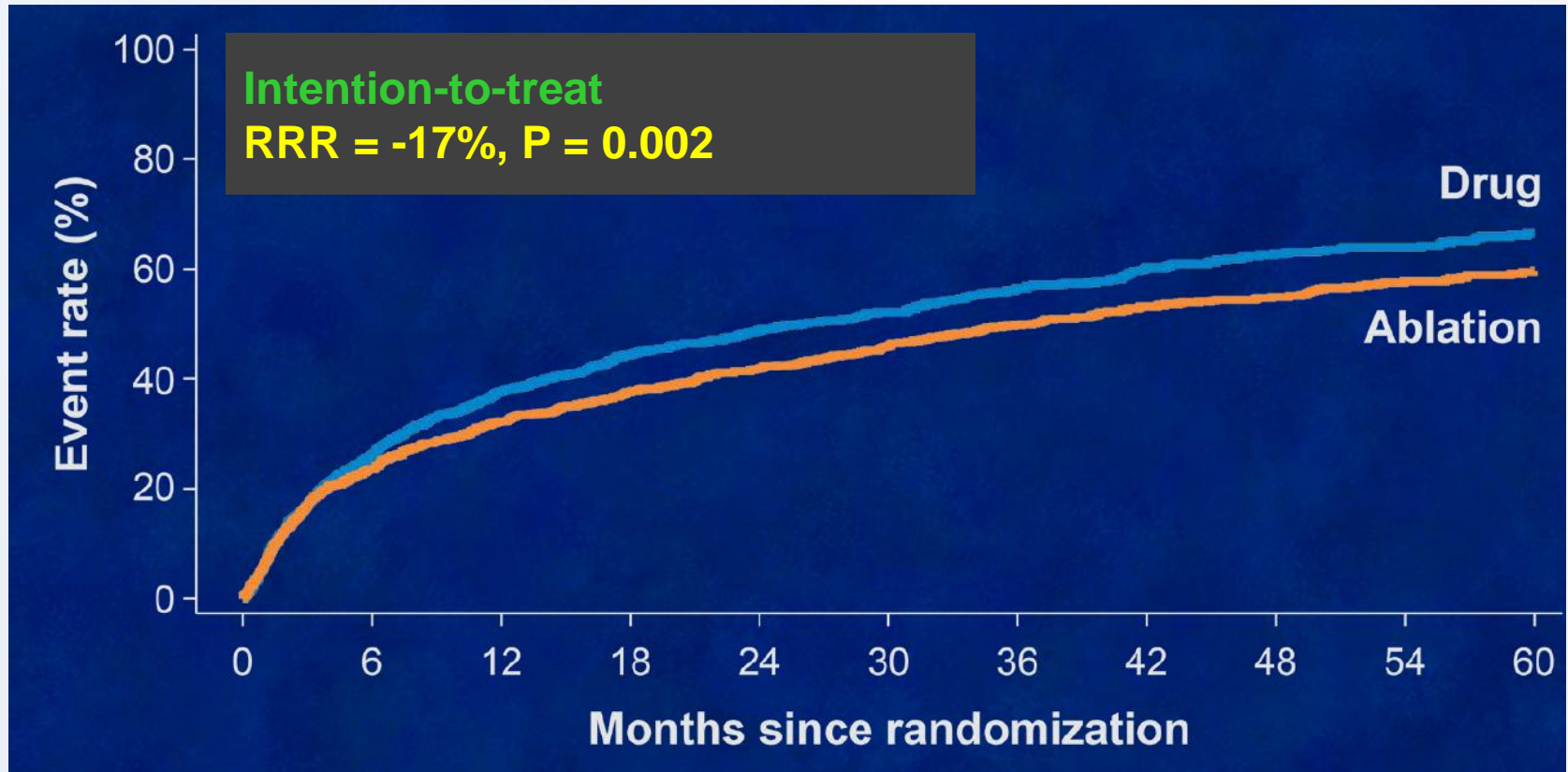
# CABANA – primary composite endpoint (ITT)

## Podskupinové analýzy



# CABANA – „minor“ secondary endpoint (ITT)

All-cause mortality + cardiovascular hospitalization

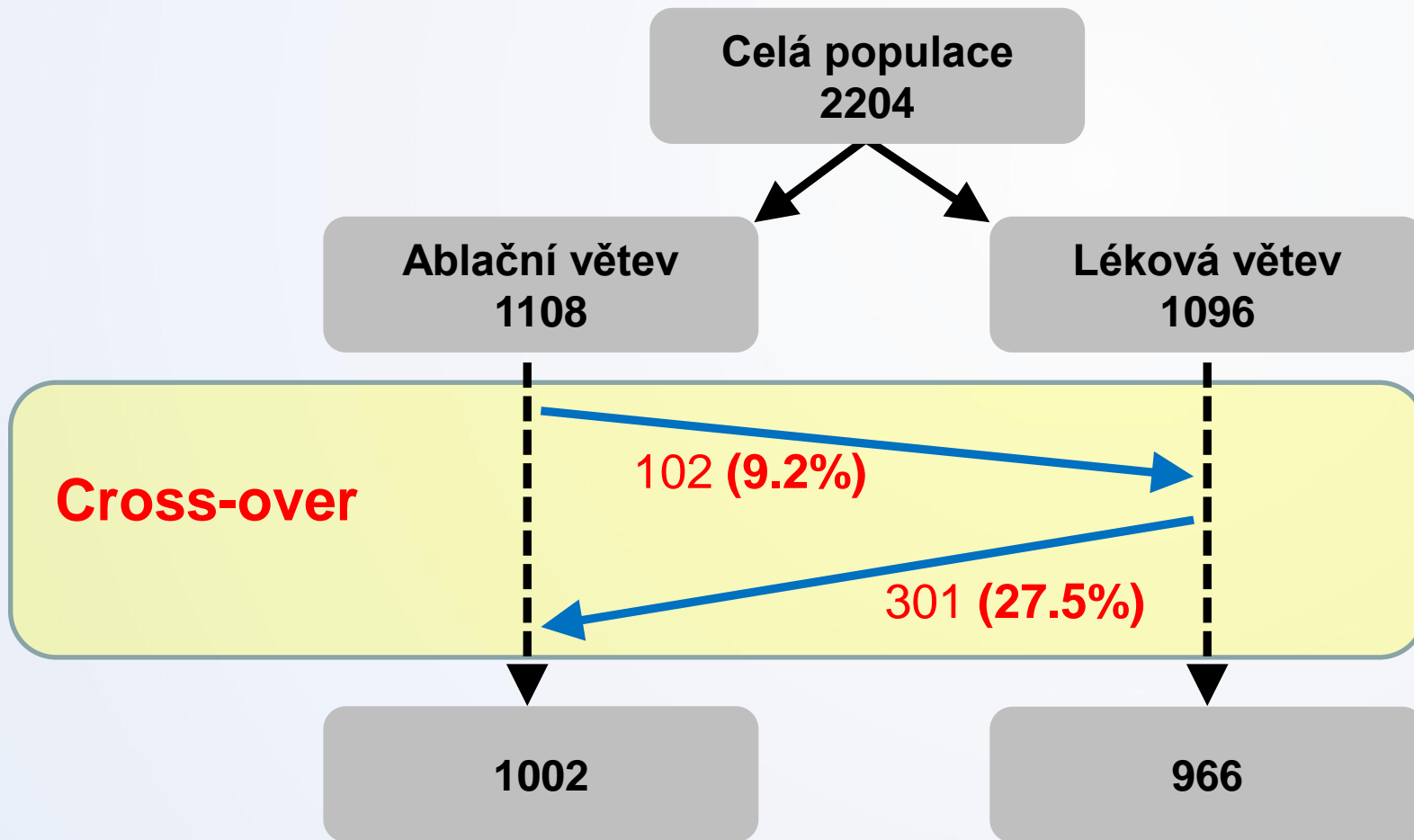


Packer DL et al.  
HRS Congress, 9-12 May 2018

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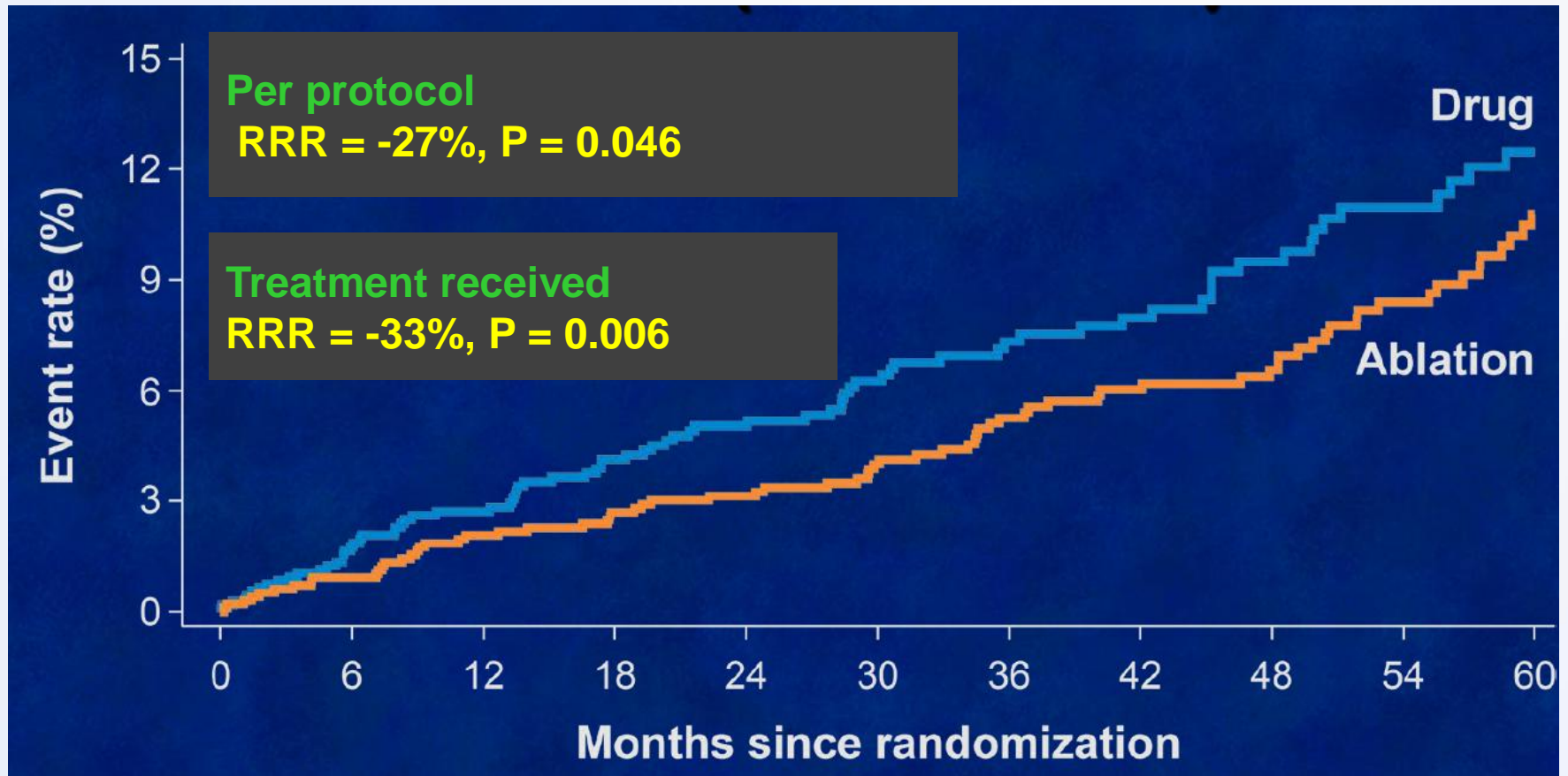


# CABANA – flowchart



# CABANA – exploratory analyses

## Primary composite endpoint

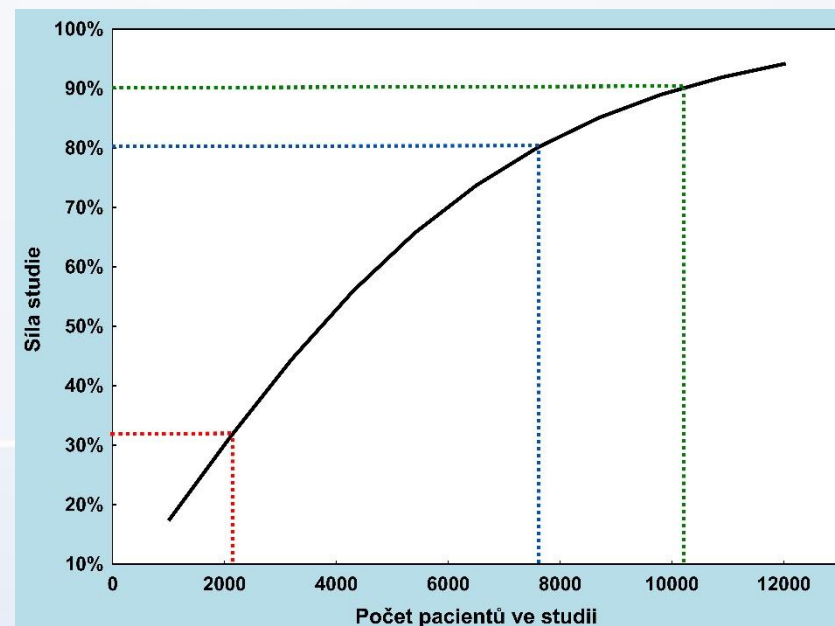
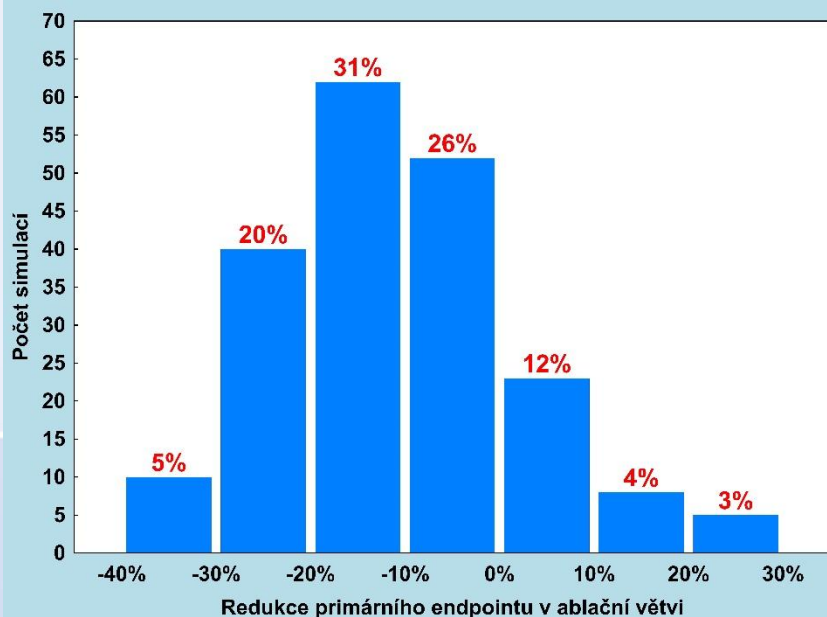
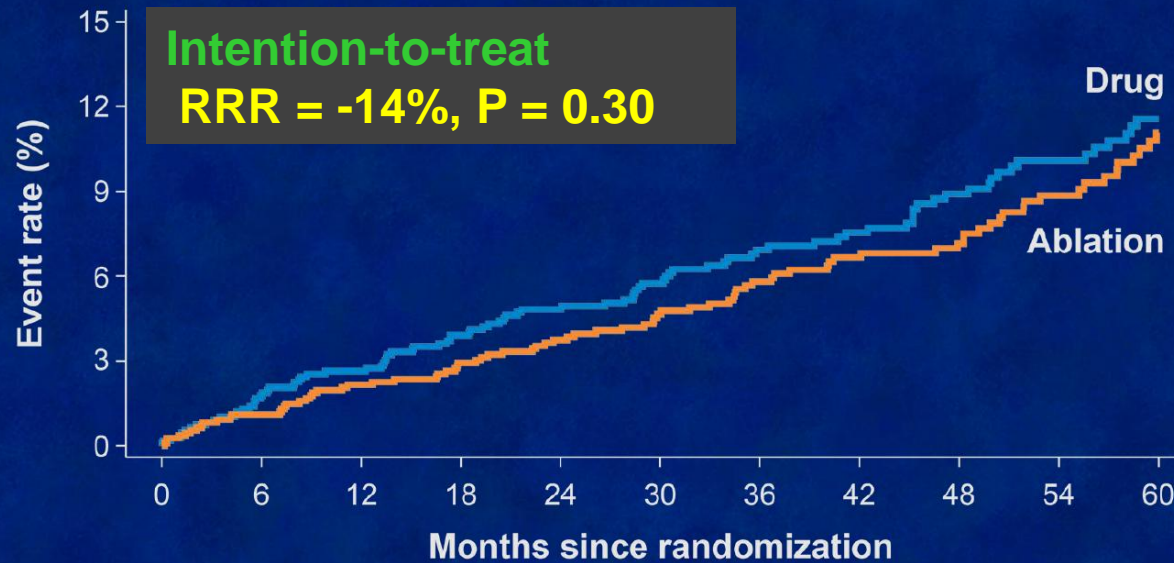




# CABANA – simulace

## Primary Composite Endpoint

- death
- disabling stroke
- serious bleeding
- cardiac arrest



# What CABANA does not tell us

## A critical appraisal

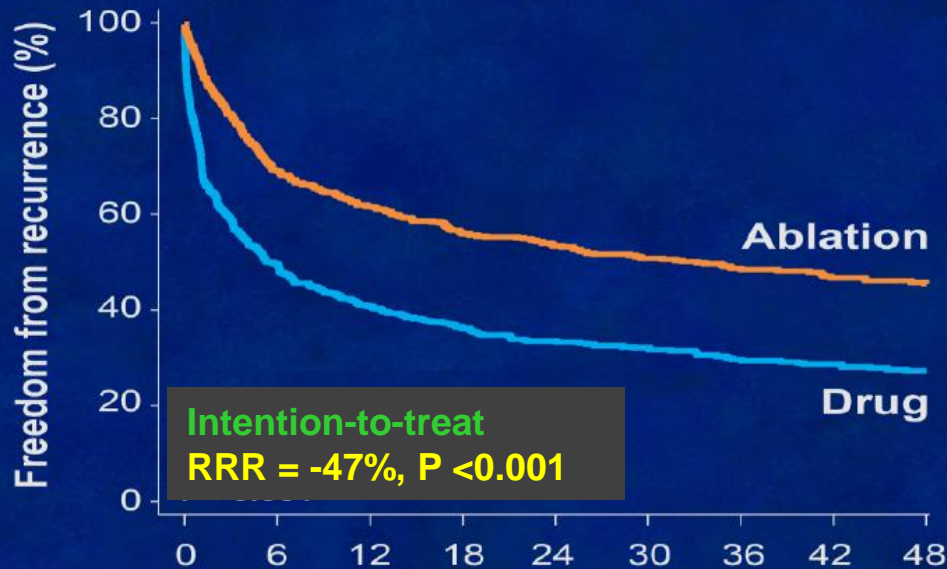
### Conclusions of the CABANA Trial

- The CABANA trial is an important study that yielded a clear result, i.e. ablation does ***not*** prevent the serious consequences of atrial fibrillation.
- If CABANA were a trial of a new drug, we would reject the on-treatment analyses due to their bias.
- Since ablation is expensive, carries risks and is available to very few, evaluation of its efficacy should ***not*** be held to a lower standard of evidence than evaluation of the efficacy of drugs.

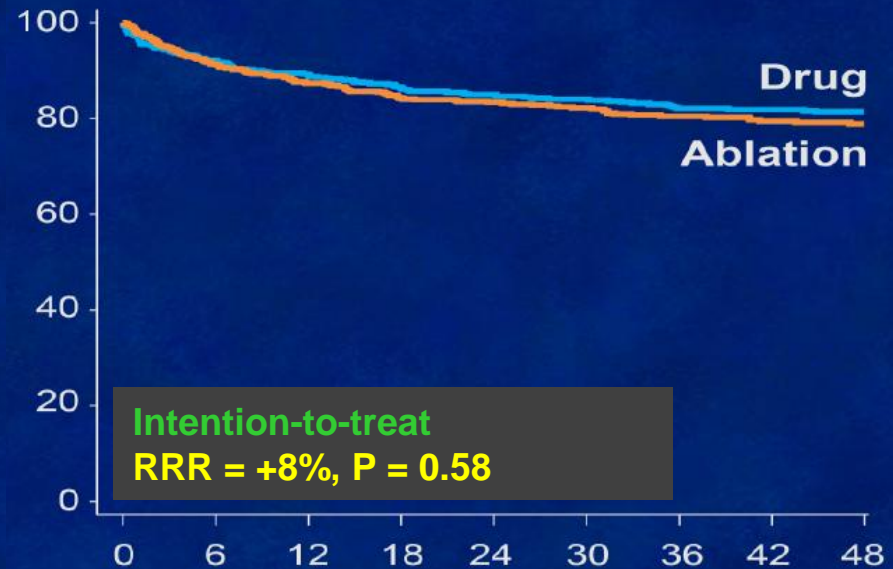


# CABANA – Rhythm Outcome (ITT)

## Atrial Fibrillation/Flutter/Tachycardia

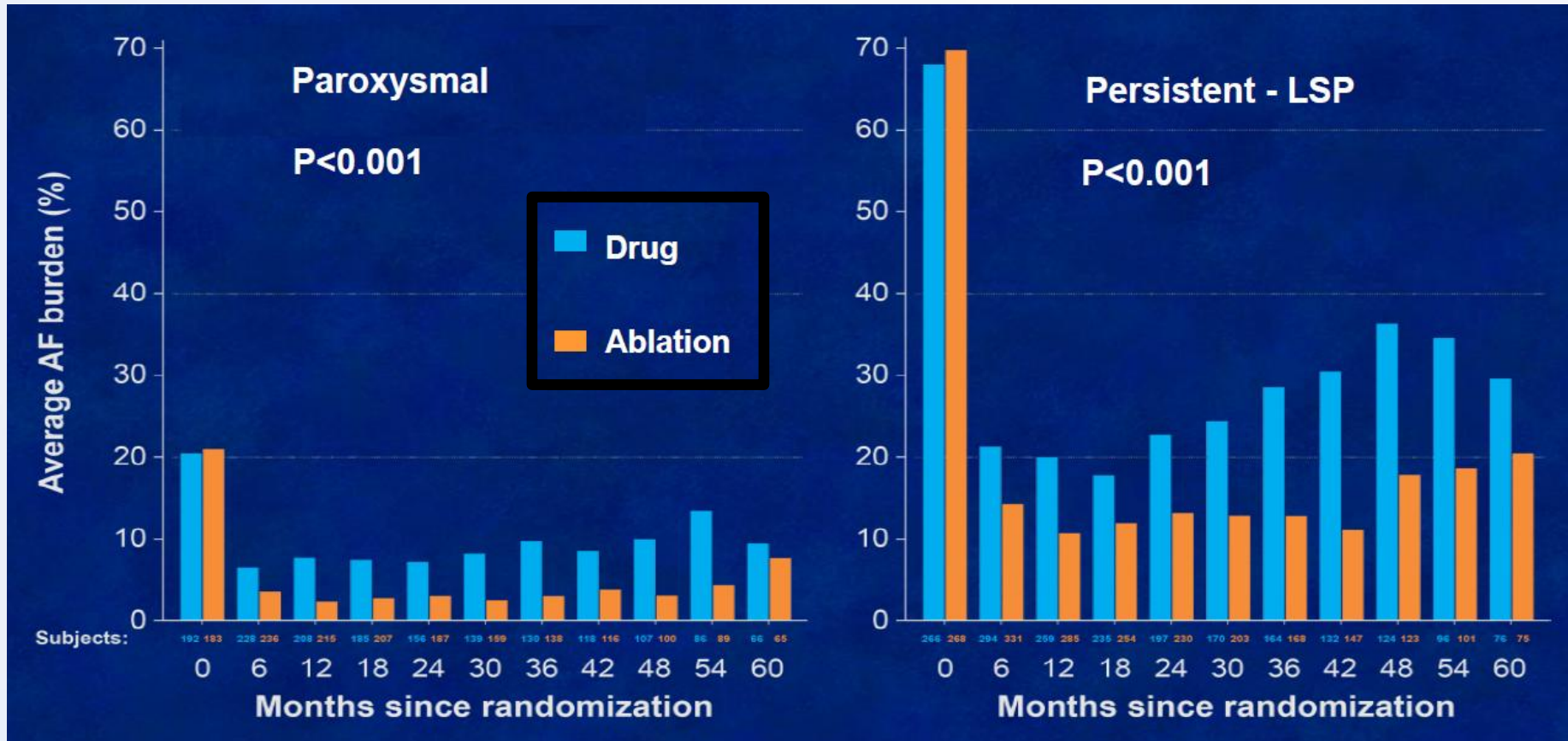


## Atrial Flutter/Tachycardia



Poole JE et al.  
ESC Congress, 25-29 August 2018

# CABANA – Rhythm Burden (ITT)

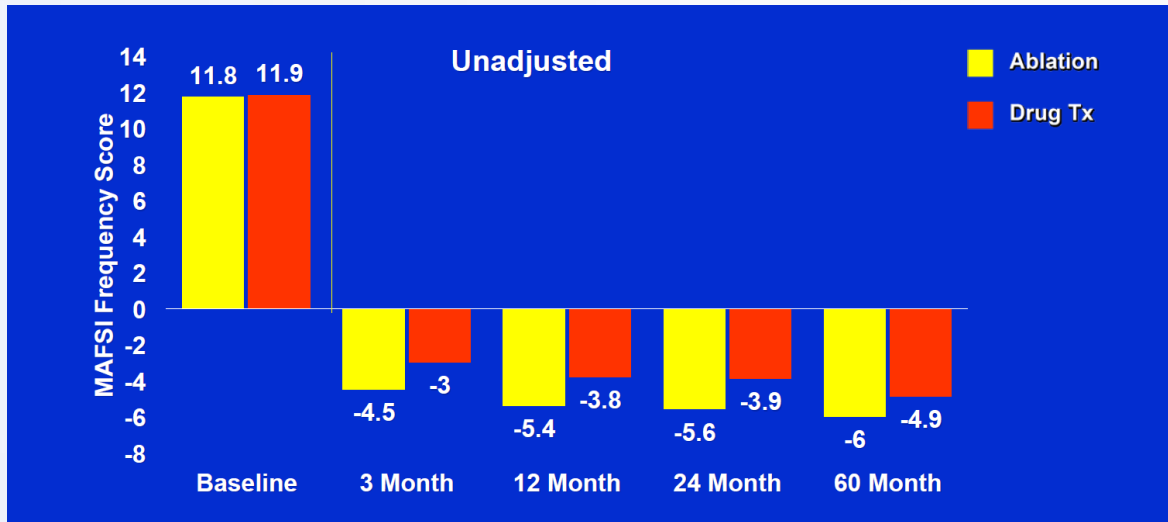


Poole JE et al.  
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# CABANA – symptomy (MAFSI)

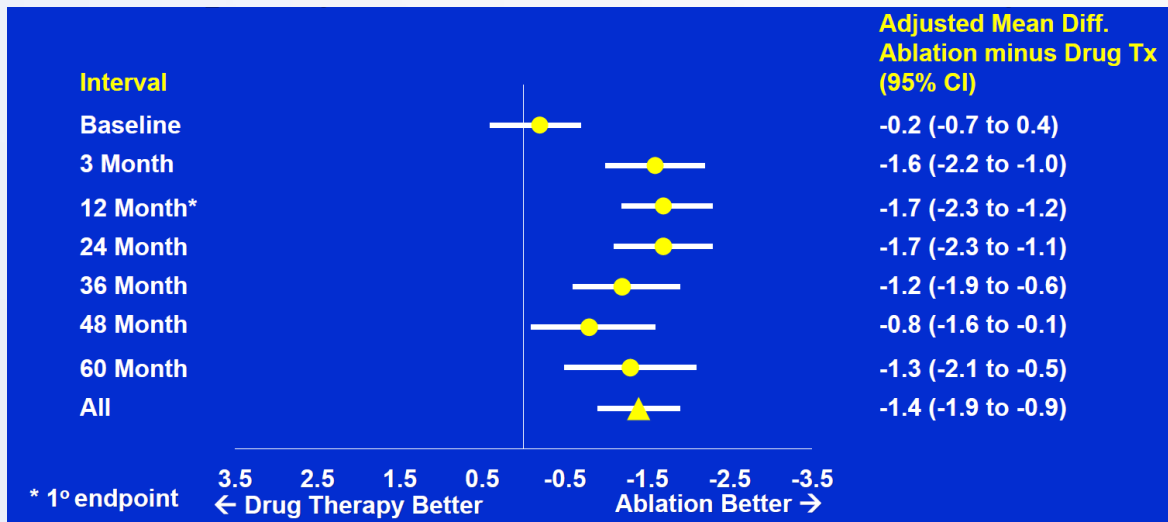


## Mayo Clinic Atrial Fibrillation Specific Symptom Inventory

Symptomy:

0 = žádné

40 = nejhorší



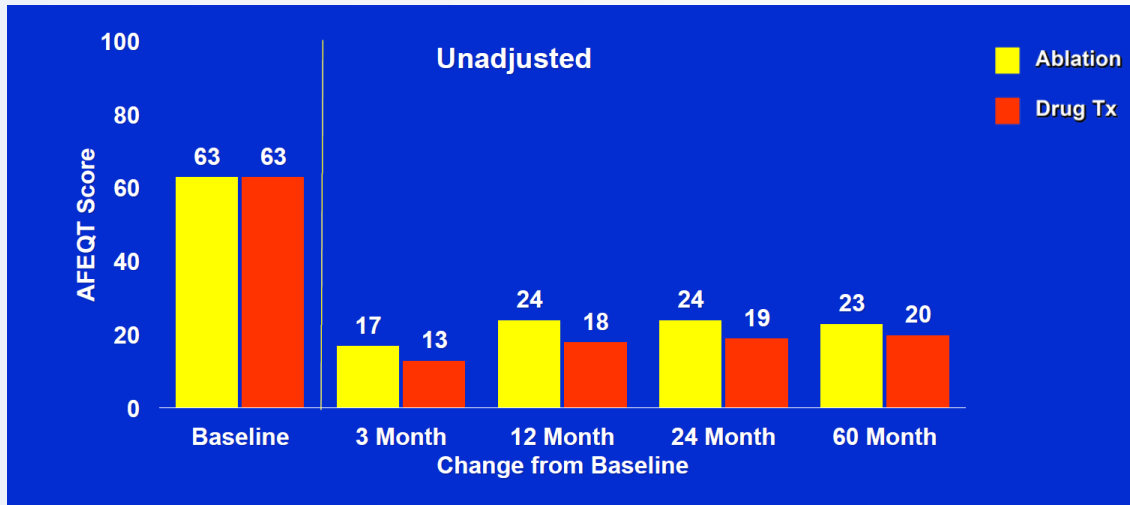
## Pokles MAFSI (ve 12. měsíci)

**Léky: -3.8 bodu**

**Ablace: -5.4 bodu**

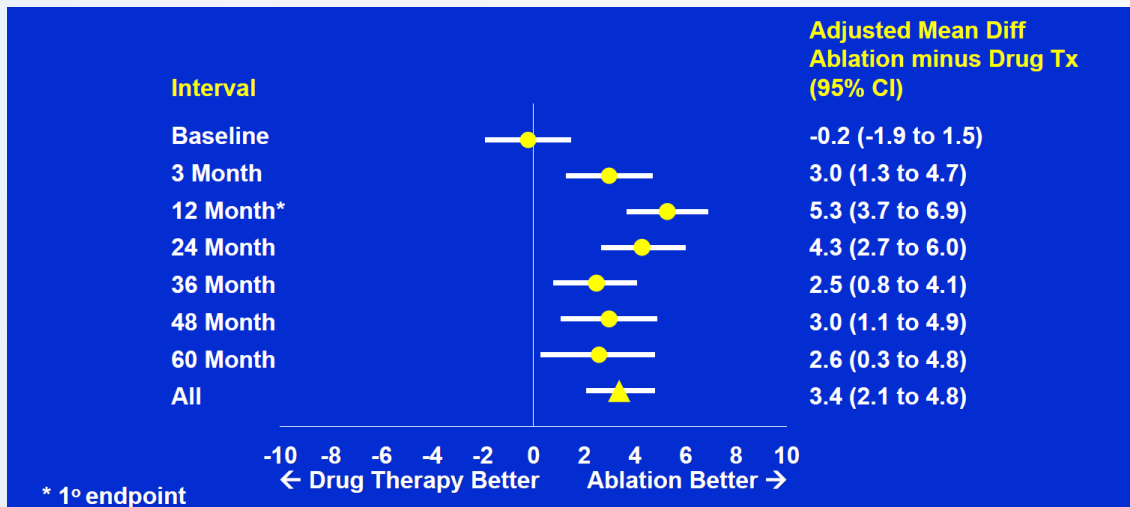
**Delta: -1.6 bodu  
(42%)**

# CABANA – kvalita života (AFEQT)



## Atrial Fibrillation Effect on Quality of Life

Kvalita života:  
0 = nejhorší  
100 = nejlepší



## Vzestup EFEQT (ve 12. měsíci)

Léky: +18 bodů

Ablace: +24 bodů

Delta: +6 bodů  
**(33%)**

# What CABANA does not tell us

## A critical appraisal

### Major Take-Home Points From the CABANA Trial

- Catheter ablation may be a reasonable therapeutic choice for patients with distressing symptoms of atrial fibrillation (particularly if recent onset) if they have not responded to (or would like to avoid) taking anti-arrhythmic drugs.
- There is no clear or unbiased evidence that catheter ablation prevents any of the serious consequences of atrial fibrillation (death, stroke or heart failure) in patients at high risk of cardiovascular events.



# Závěry

- **Ablační léčba FS (v porovnání s léky)**
  - signifikantně **snižuje arytmiickou zátěž**
  - signifikantně **zlepšuje kvalitu života**
  - neovlivňuje signifikantně mortalitu ani výskyt dalších závažných klinických událostí
- **Ablační léčba FS je bezpečná**
- **Ablaci pro fibrilace síní je plošně indikovat jako léčbu první volby**







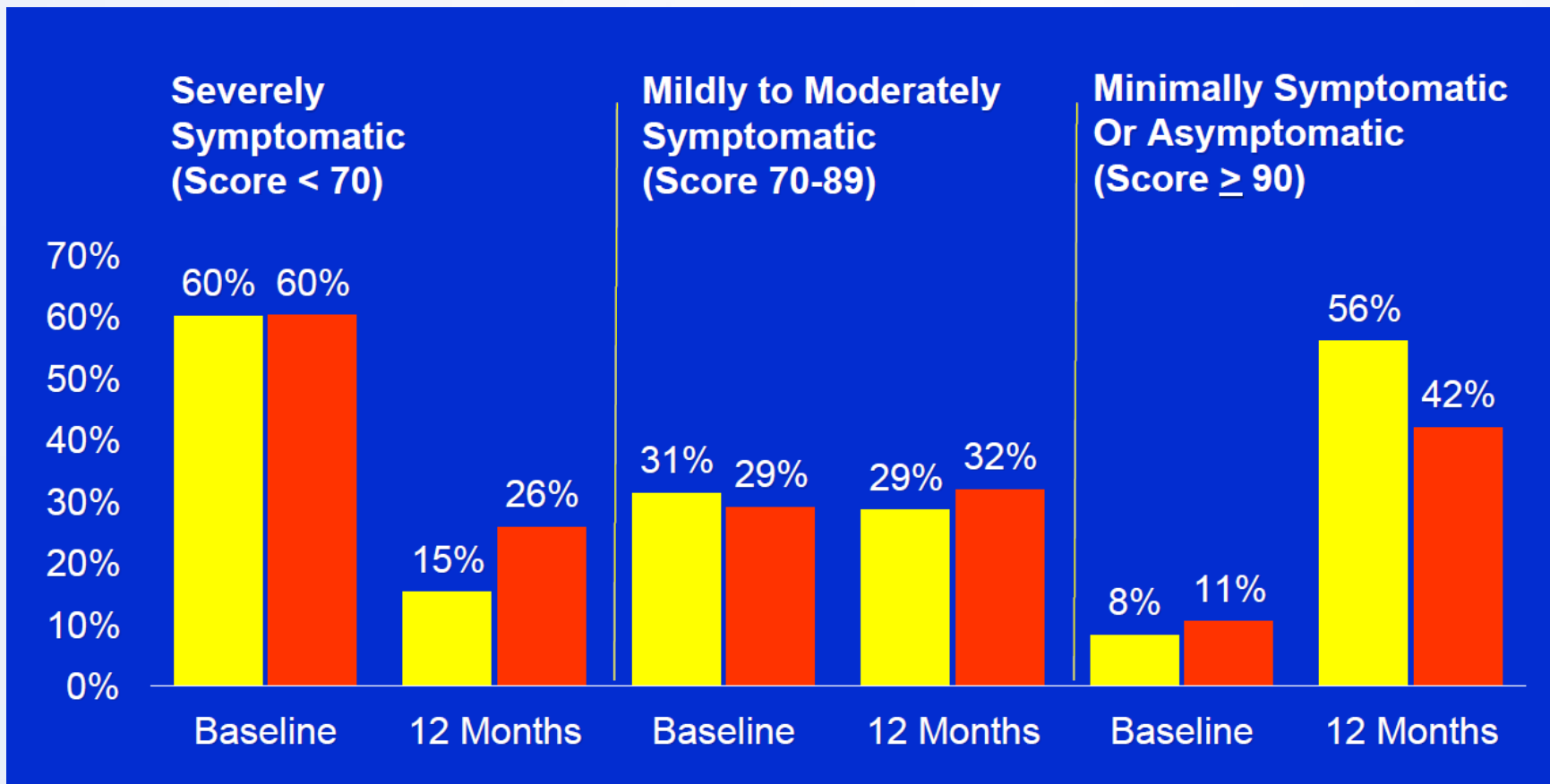
# Adverse Events in CABANA

| Event   | Ablation<br>n = 1006<br>n (%)* |
|---|--------------------------------|
| Catheter Insertion                              | 39 (3.9)                       |
| Hematoma  | 23 (2.3)                       |
| Pseudo aneurysm                                 | 11 (1.1)                       |
| Atrial venous fistula                           | 4 (0.4)                        |
| Pneumothorax                                    | 1 (0.1)                        |
| Sepsis  | 1 (0.1)                        |
| DVT   | 0                              |
| Pulmonary embolus                               | 0                              |
| Catheter Manipulation Within the Heart          | 34 (3.4)                       |
| Pericardial effusion not requiring intervention | 22 (2.2)                       |
| Cardiac tamponade with perforation              | 8 (0.8)                        |
| TIA   | 3 (0.3)                        |
| Coronary occlusion                              | 0                              |
| Myocardial infarction                           | 1 (0.1)                        |
| Complete heart block                            | 0                              |
| Valvular damage                                 | 0                              |
| Ablation-related Events                         | 18 (1.8)                       |
| Severe pericardial chest pain                   | 11 (1.1)                       |
| Esophageal ulcer                                | 5 (0.5)                        |
| Pulmonary Vein Stenosis > 75%                   | 1 (0.1)                        |
| Phrenic nerve injury                            | 1 (0.1)                        |
| Atrial esophageal fistula                       | 0                              |
| Medication-related Events                       | 0                              |
| Heparin induced bleeding                        | 0                              |

| Event                             | Pts Receiving Drug<br>n = 1092<br>n (%)* |
|-----------------------------------|--|
| Hyper- or hypothyroidism          | 17 (1.6)                                 |
| Hypotension                       | 3 (0.3)                                  |
| Major proarrhythmic event (VT,VF) | 9 (0.8)                                  |
| Torsades des pointes              | 0  |
| Atrial proarrhythmic event        | 1 (0.1)                                  |
| Heart failure                     | 0  |
| Allergic reaction                 | 7 (0.6)                                  |
| Gastrointestinal abnormality      | 3 (0.3)                                  |
| Moderate or severe diarrhea       | 0  |
| Liver injury/failure              | 3 (0.3)                                  |
| Pulmonary toxicity                | 1 (0.1)                                  |
| Blindness                         | 0  |
| Kidney damage                     | 0  |
| Renal failure                     | 0  |
| Severe headache                   | 0  |

\* n (%) = number (percent) of patients who reported drug-related adverse event. Percent is calculated among all patients that have received drug.

# CABANA – AFEQT



Mark DB et al.  
ESC Congress, 25-29 August 2018