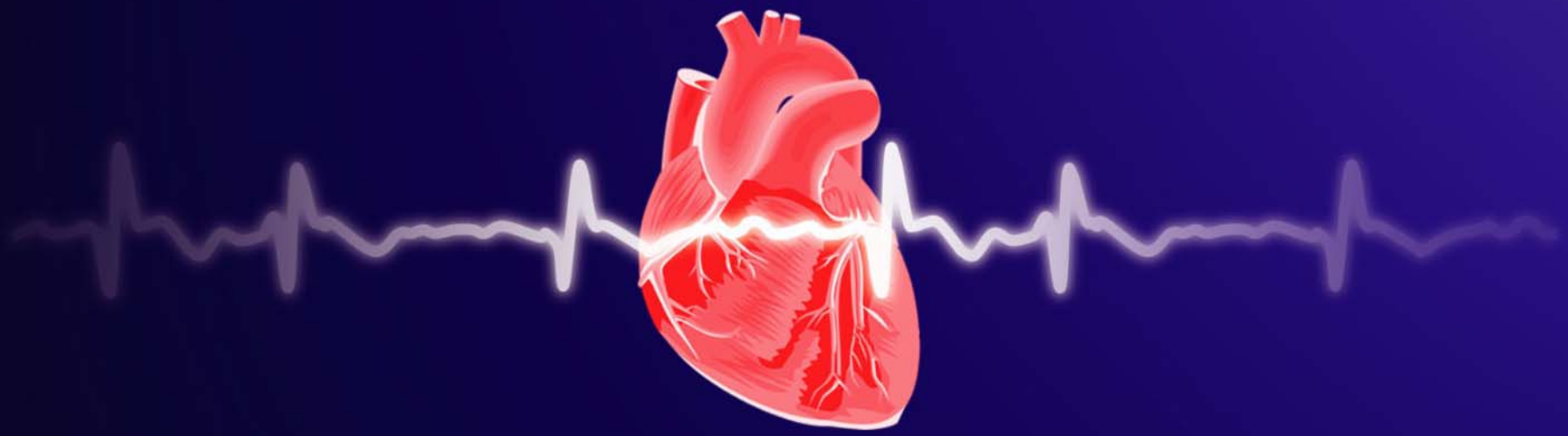
Catheter Ablation of Atrial Fibrillation:
Current Controversies in Indications

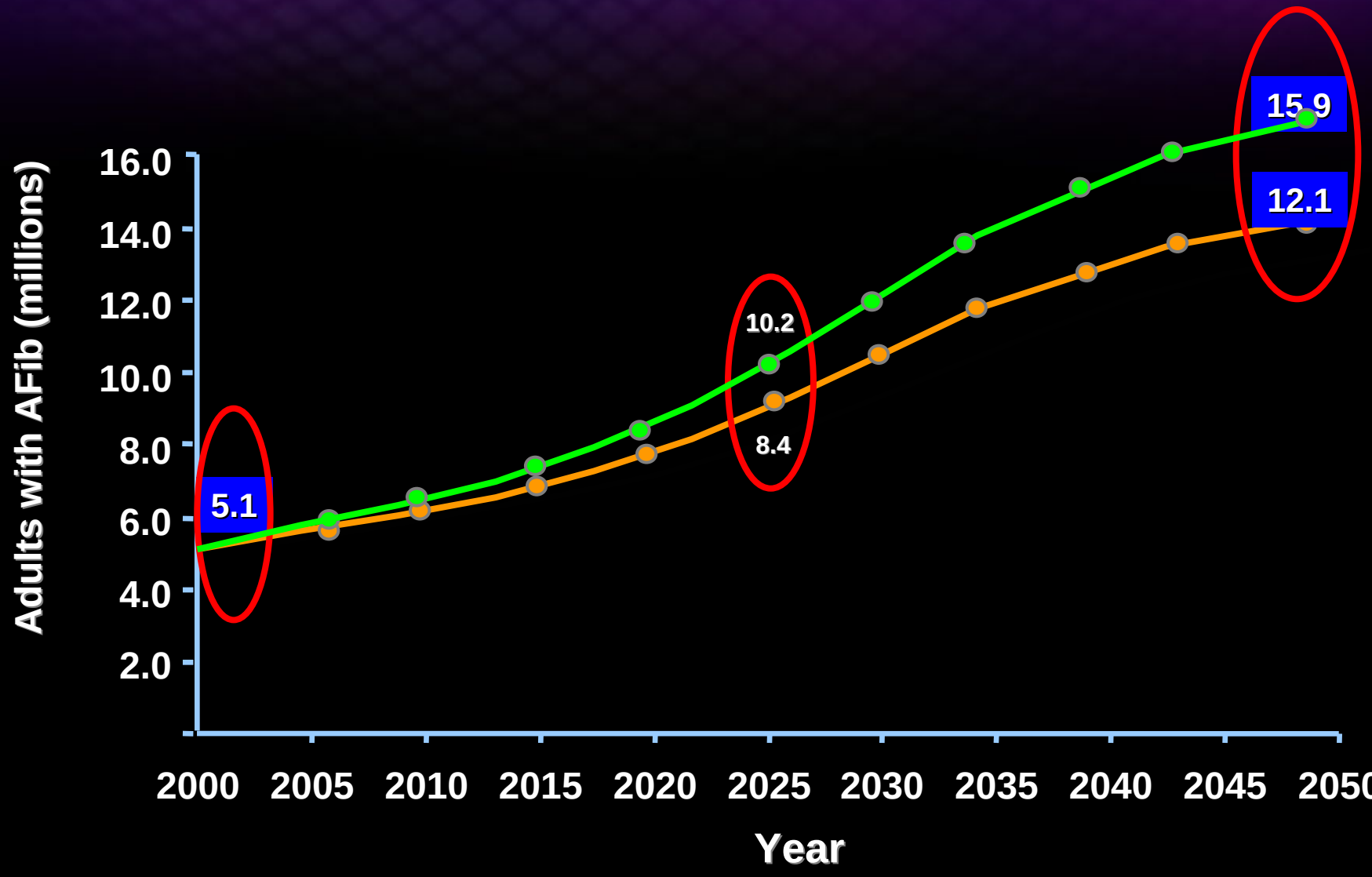


ChangSheng Ma

Department of Cardiology, Beijing Anzhen Hospital

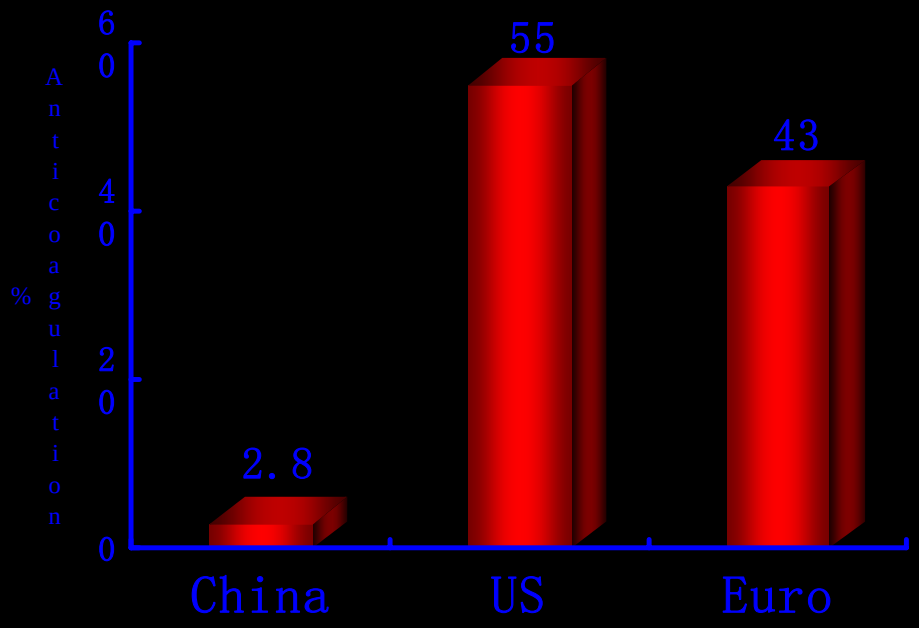
Capital University of Medical Sciences, P.R. China

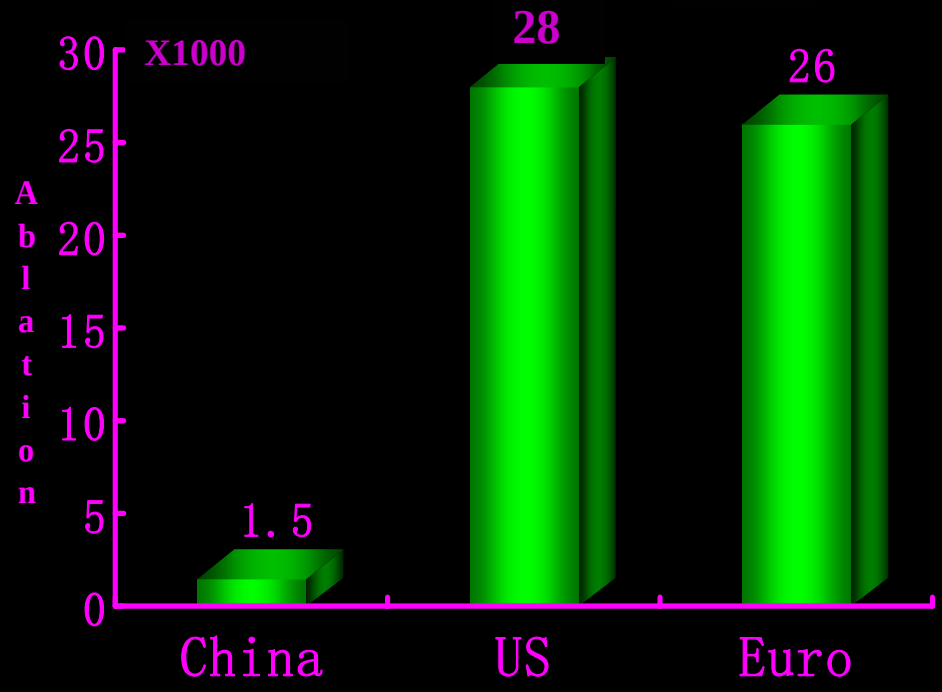
Prevalence of AF is increasing



Miyasaka.Circulation.2006:119

Current status of AF therapy in China

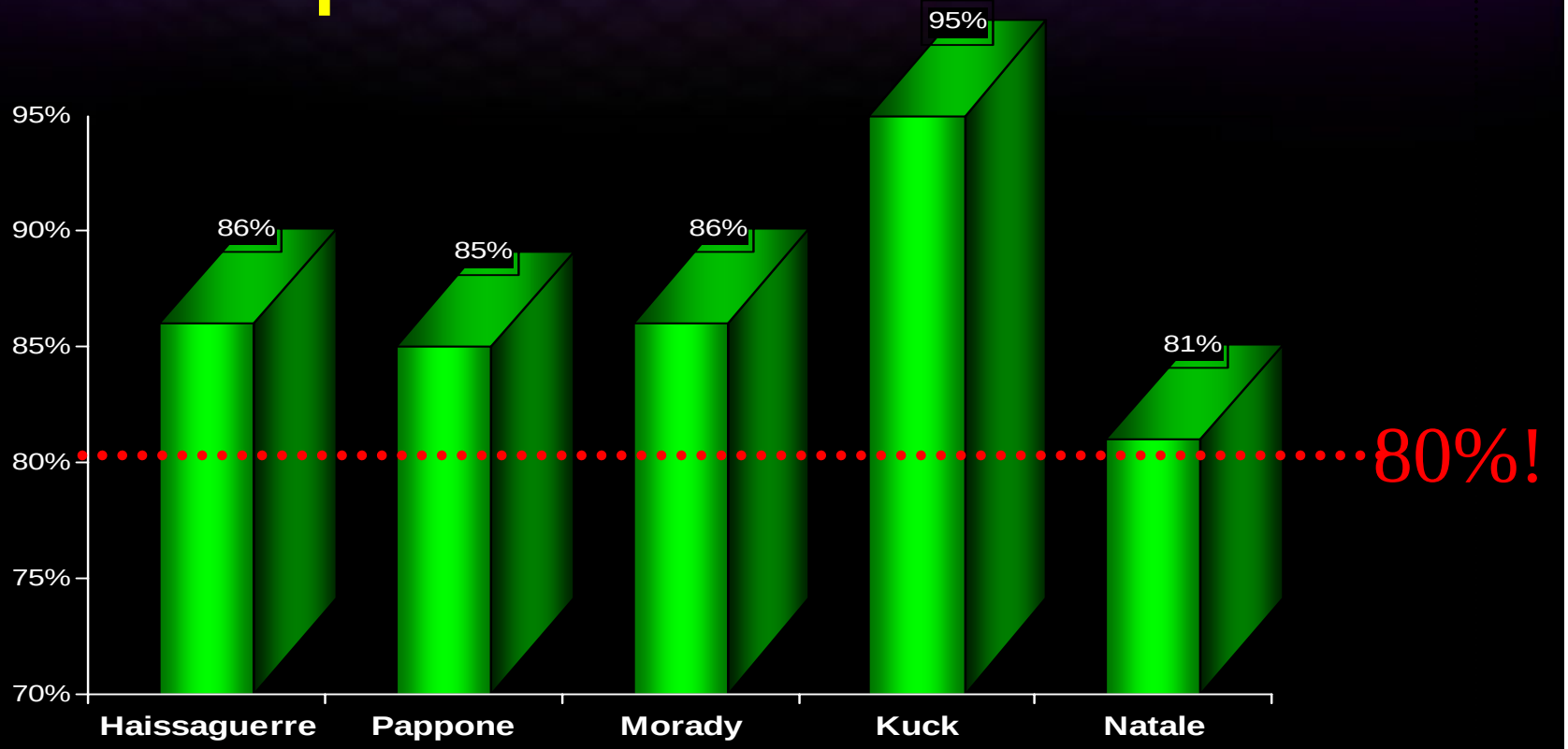




Ablation of AF for me ?

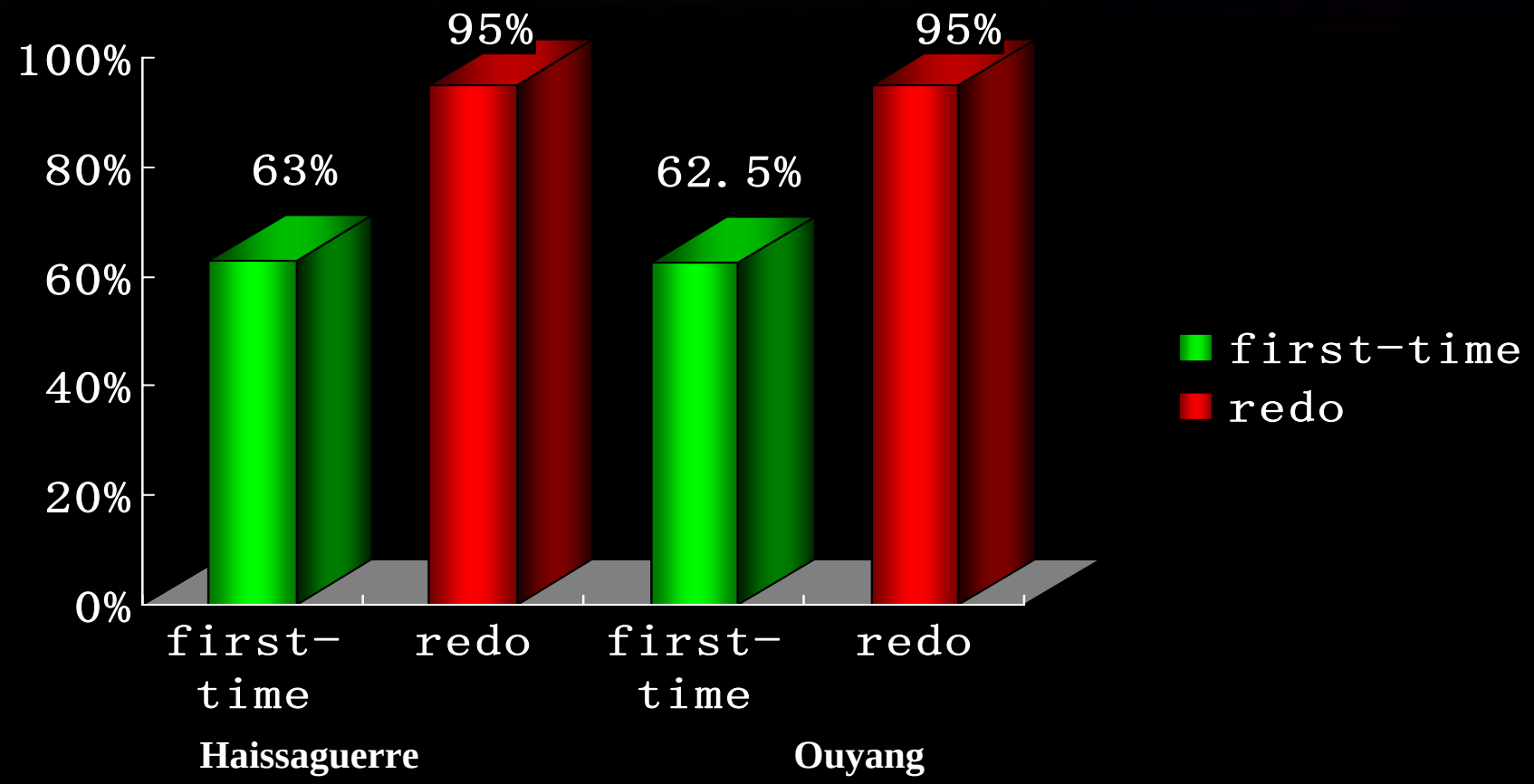
Success rate of AF ablation

Experience in worldwide



Afib type	Lone Afib	PAF	PAF	Afib	Afib
F/U (mons)	12	12	6	6	12
Pub Year	2005	2004	2004	2005	2005

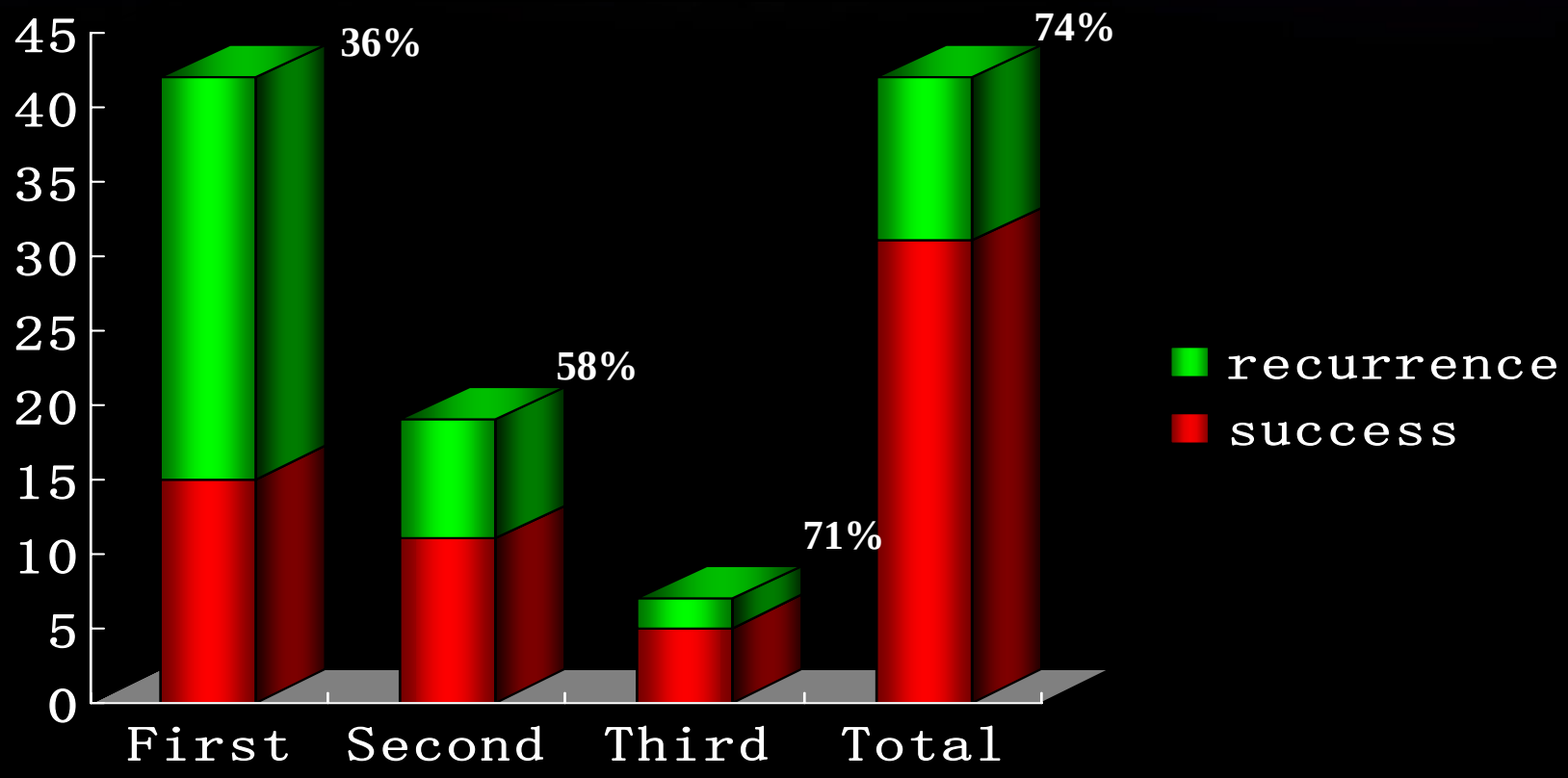
Success rate of ablation for persistent AF



Haissaguerre. JCE. 2005:1138

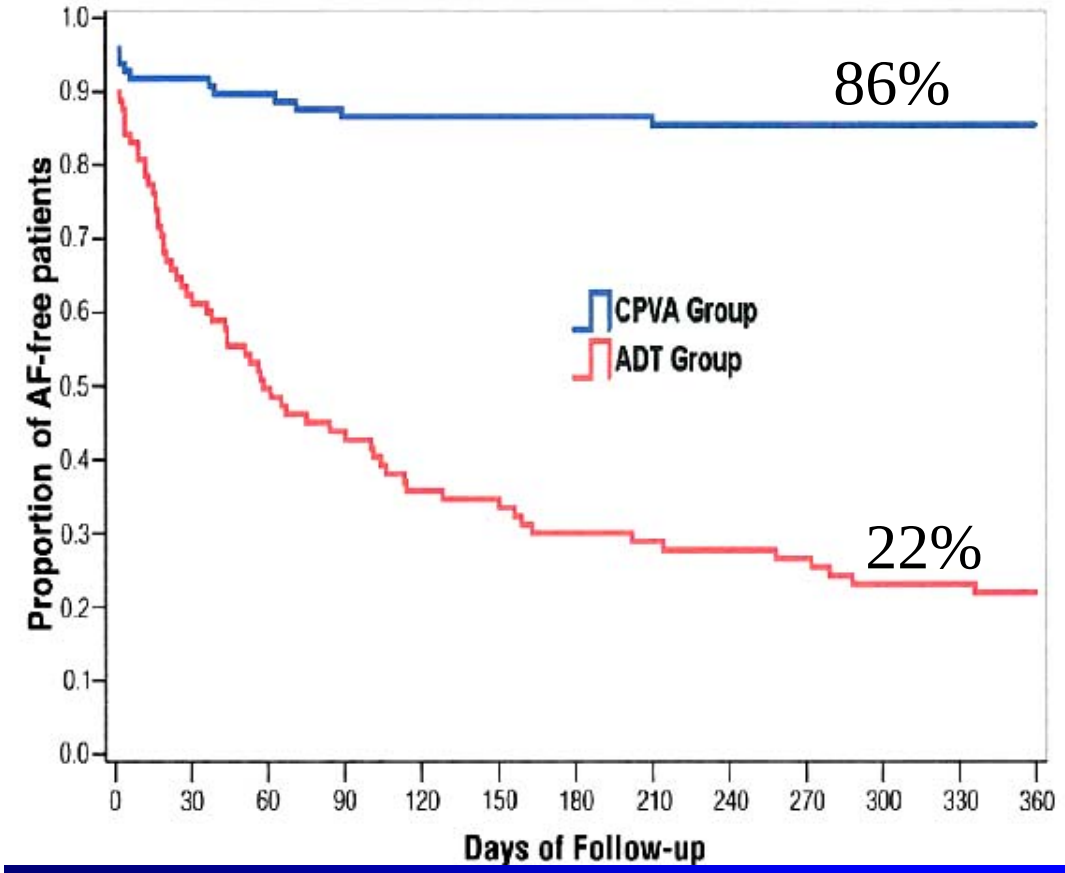
Ouyang. Circulation. 2005:3038

Success rate of ablation for permanent AF



Earley. Heart. 2006:233

Ablation for Paroxysmal Atrial Fibrillation Trial (APAFT)

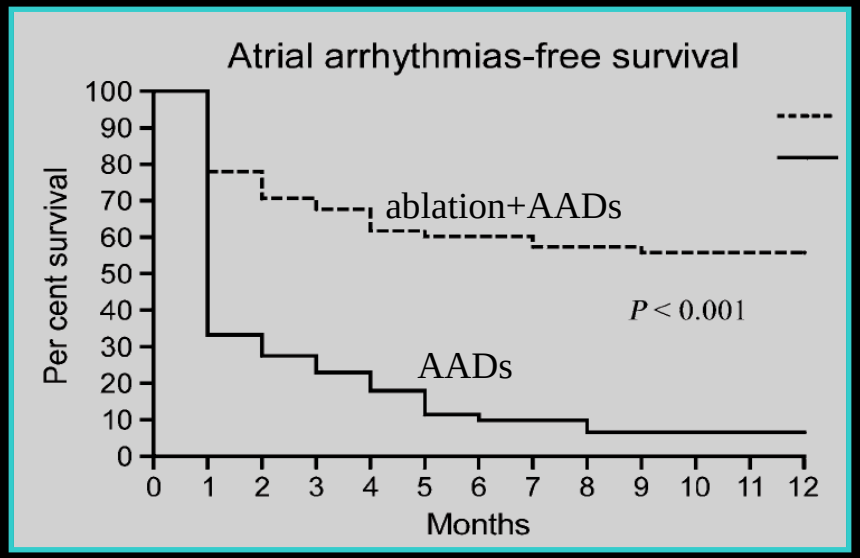


- 198 PAF pts
- Randomization
- Transtelephonic ECG F/U 1 yrs
- Success definition : atrial tachyarrythmia free

Pappone. JACC. 2006:2340

Catheter ablation is superior to antiarrhythmic durg

A prospective, multicenter, randomized, controlled study

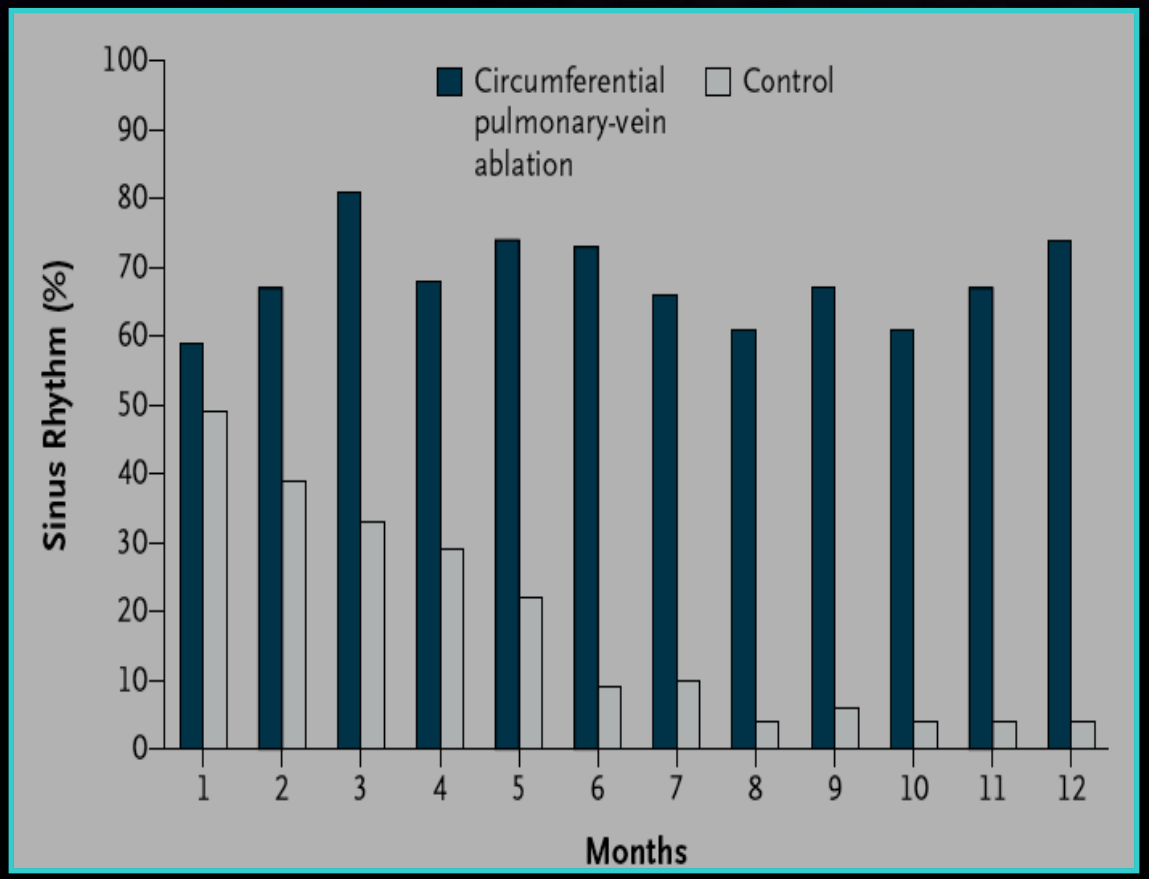


- 137 AF pts (CAF 33%)
- Randomization
- CPVA+isthmus ablation
- Transtelephonic ECG , Holter F/U 1 yr
- Ablation +AAD

  success rate 44.1%
- Success rate of AADs 8.7%

Stabile.Eur Heart J.2006:216

Circumferential pulmonary vein ablation for chronic AF



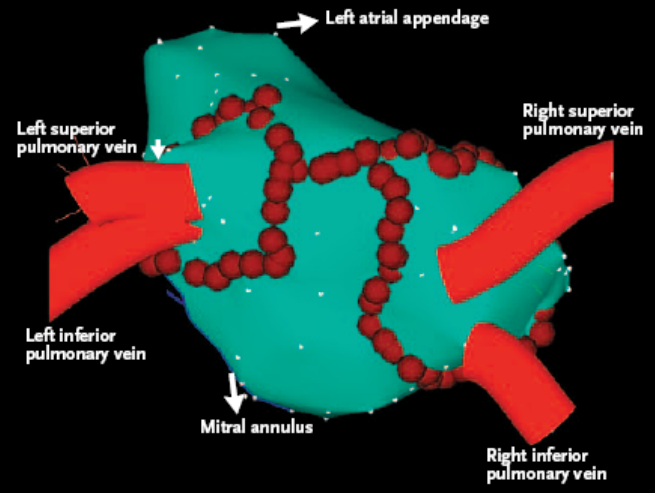
- 146 CAF pts

  AF lasts>half a yr
- Event recorder F/U 1 yr
- Success:AF,AFL free
- Success rate is 74% without AADs
- Control group:4%

Oral. NEJM. 2006:934

Circumferential Pulmonary-Vein Ablation for Chronic Atrial Fibrillation

Hakan Oral, M.D., Carlo Pappone, M.D., Aman Chugh, M.D., Eric Good, D.O., Frank Bogun, M.D., Frank Pelosi, Jr., M.D., Eric R. Bates, M.D., Michael H. Lehmann, M.D., Gabriele Vicedomini, M.D., Giuseppe Augello, M.D., Eustachio Agricola, M.D., Simone Sala, M.D., Vincenzo Santinelli, M.D., and Fred Morady, M.D.



- **146 CAF pts**
- **diameter of LA ↓**

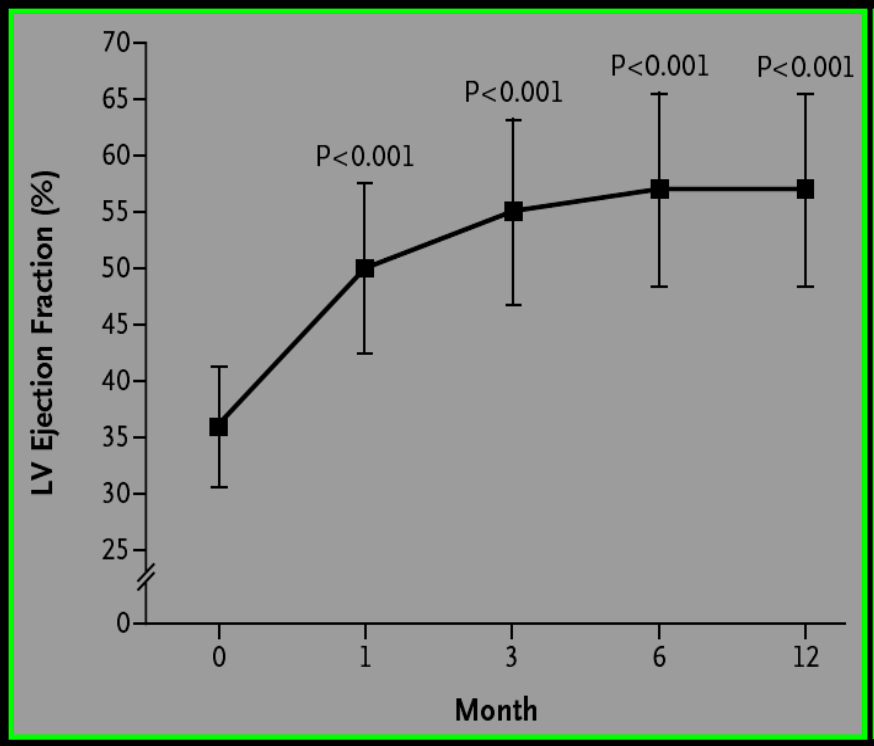
  45mm vs 40mm
- **LVEF ↑**

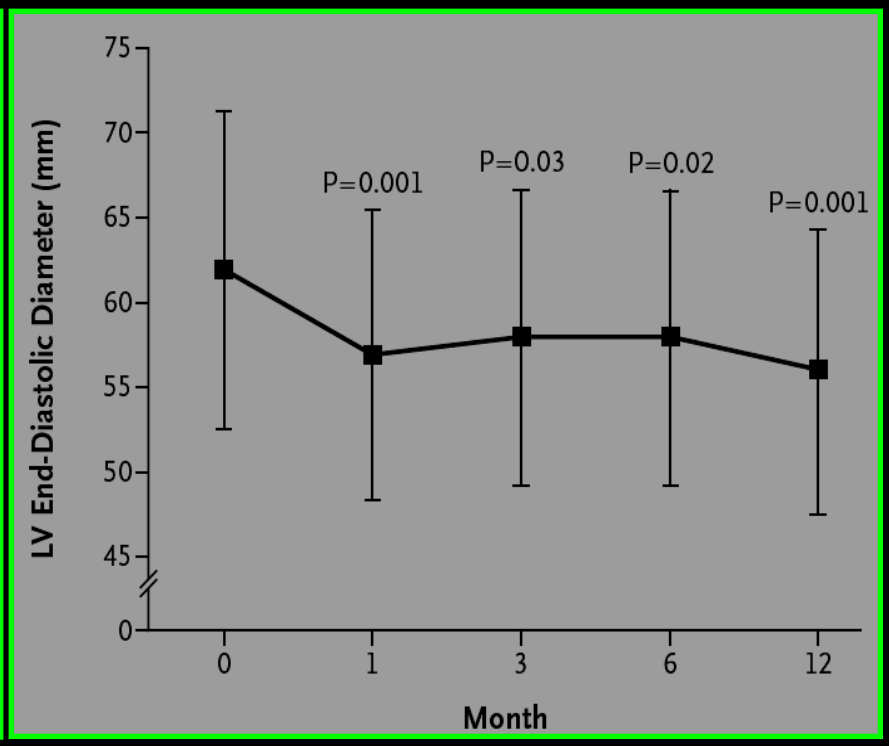
  55% vs 62%
- **Improve symptom**

Oral.NEJM.2006:934

Catheter ablation improve prognosis

Catheter ablation for patients with AF and HF

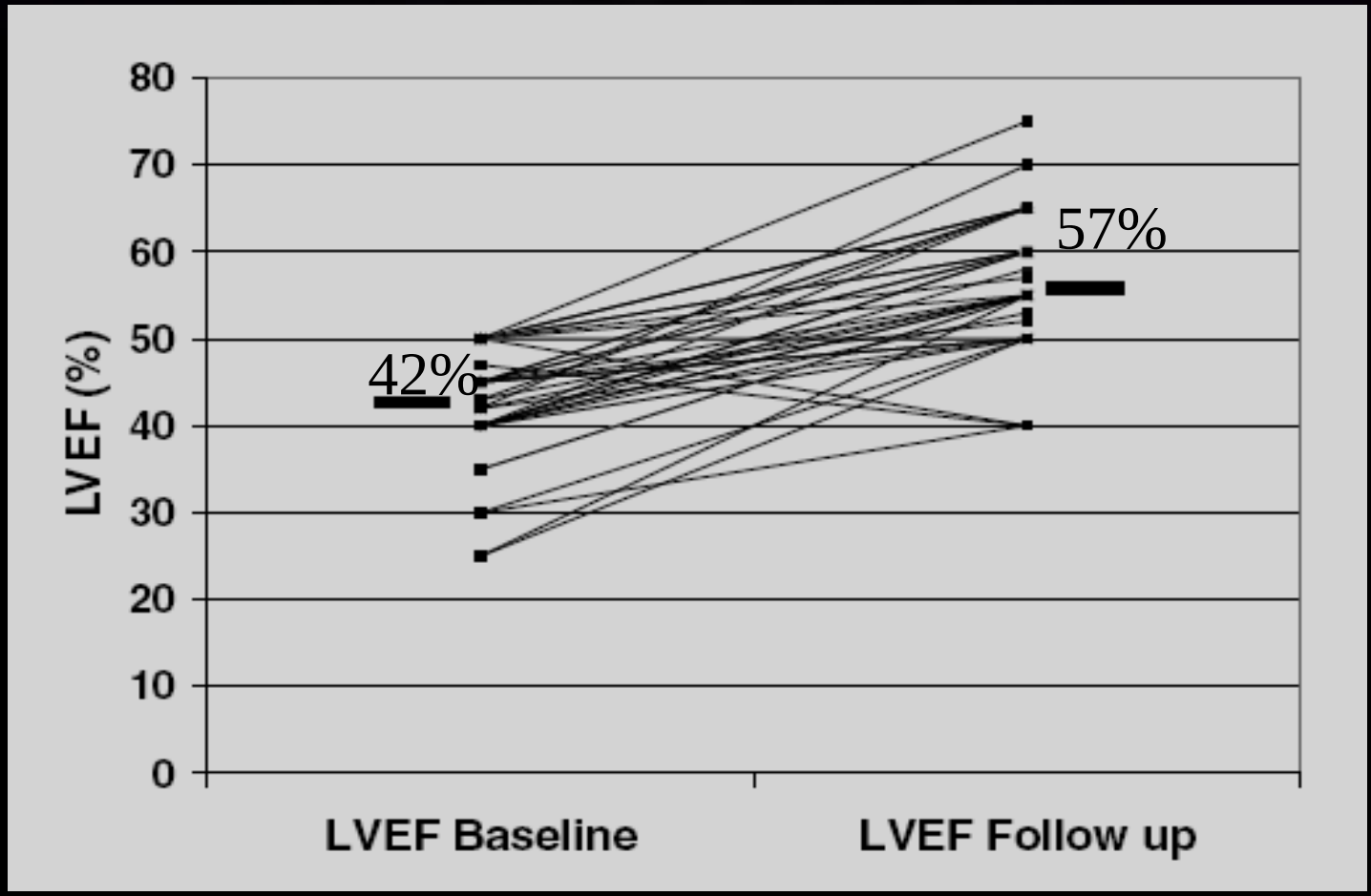




Hsu . NEJM. 2004: 2372

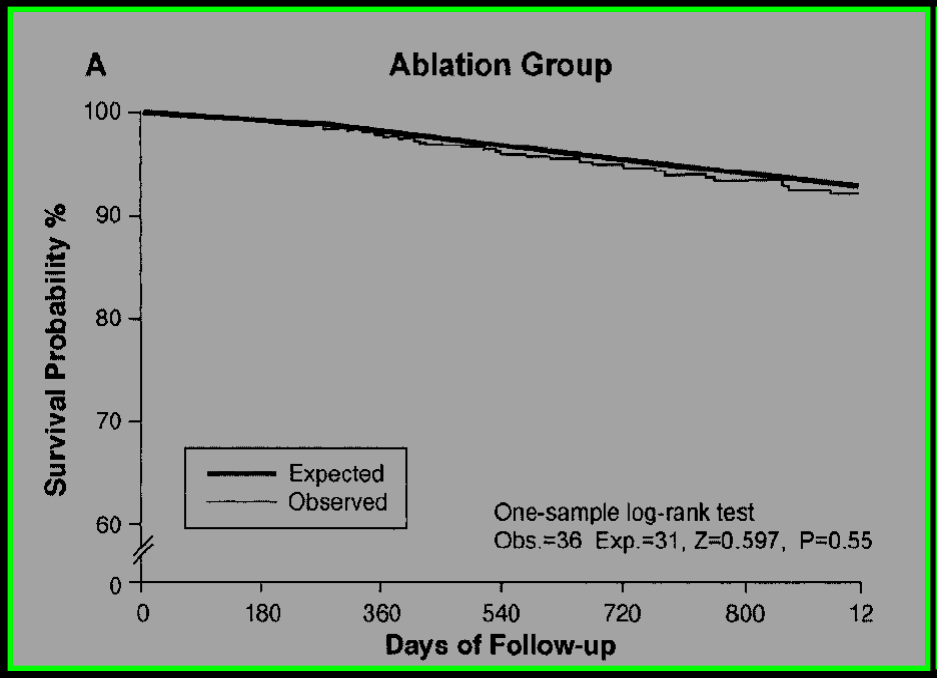
Catheter ablation improve prognosis

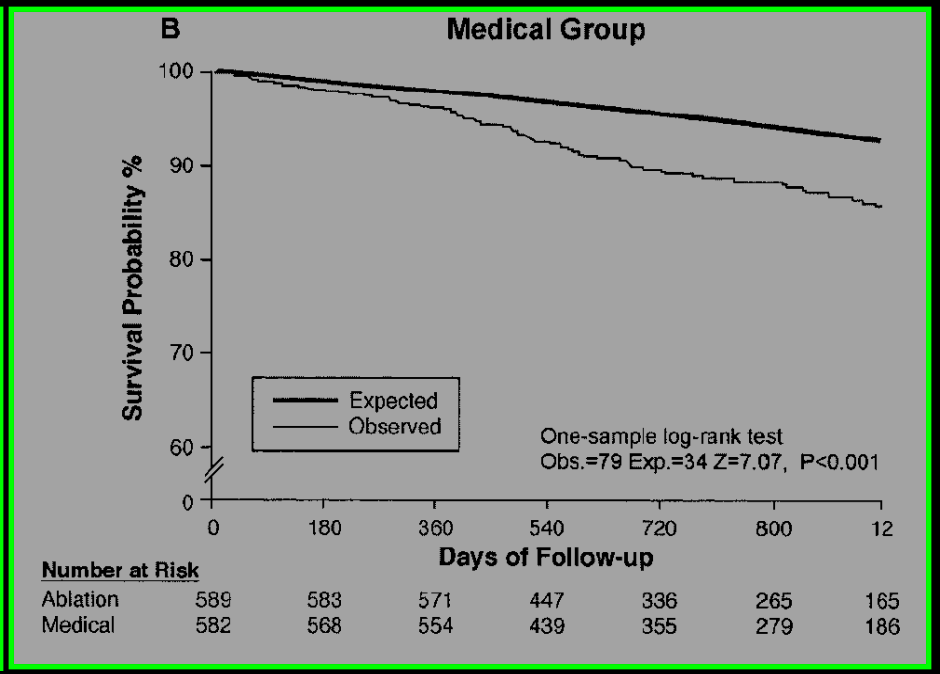
Catheter ablation for patients with AF and HF



Gentlesk. JCE. 2007:9

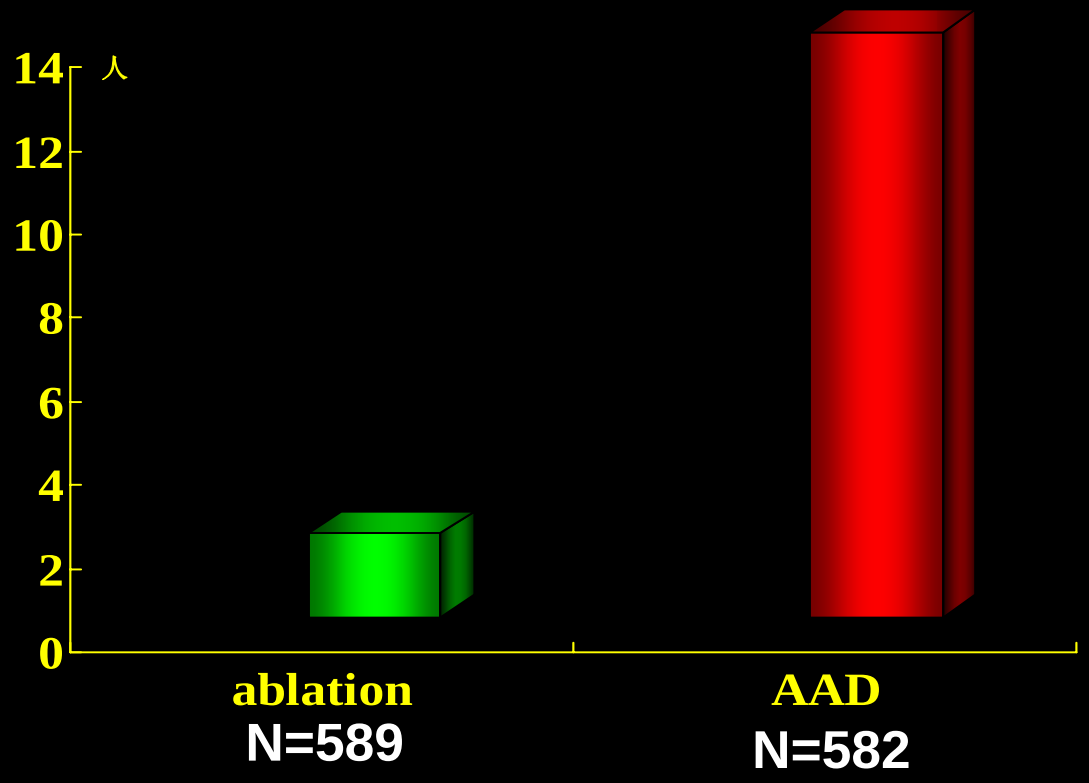
Catheter ablation improve prognosis





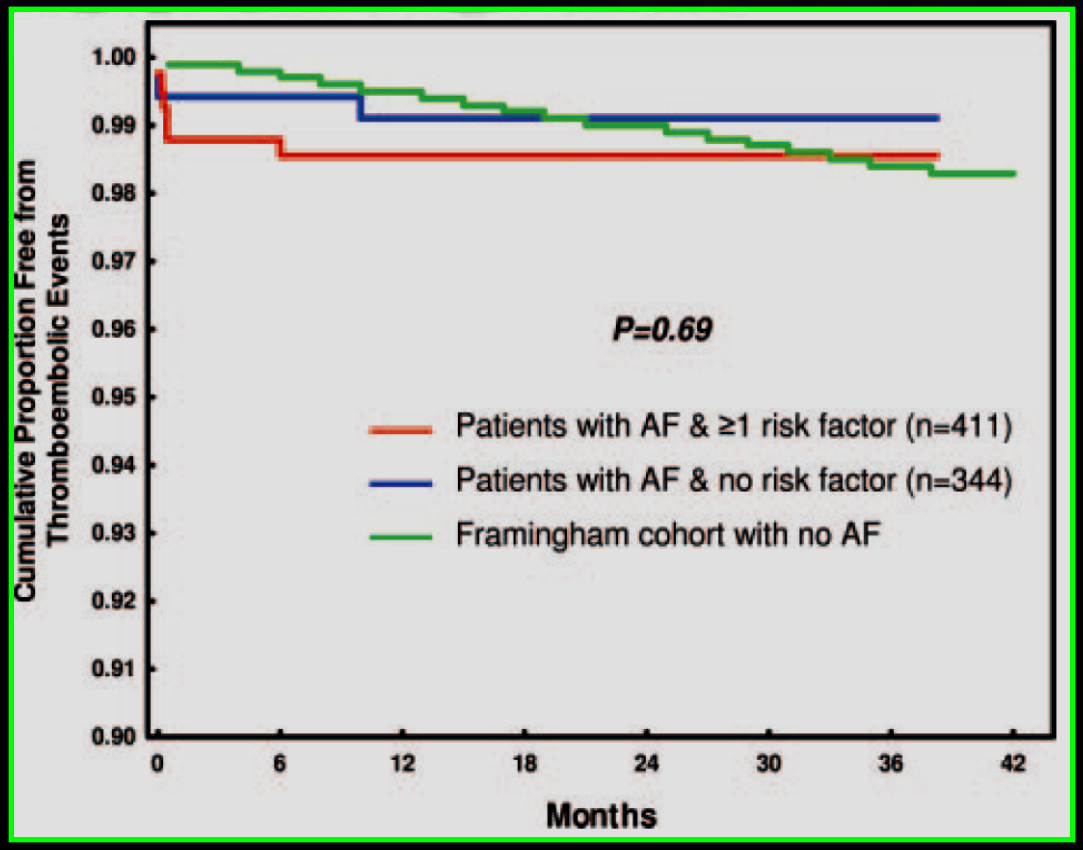
Pappone . JACC.2003:185

Catheter ablation decrease the incidence of stroke



Pappone . JACC.2003:185

Catheter ablation decrease the incidence of stroke



- 755 pts
- The incidence of stroke/TIA was 1.1%
- 0.9% occurred whithin 2 weeks of RFCA
- The incidence of thromboembolic event was similar to the general population
- Patients with sinus rhythm was thromboembolic event free after the procedure

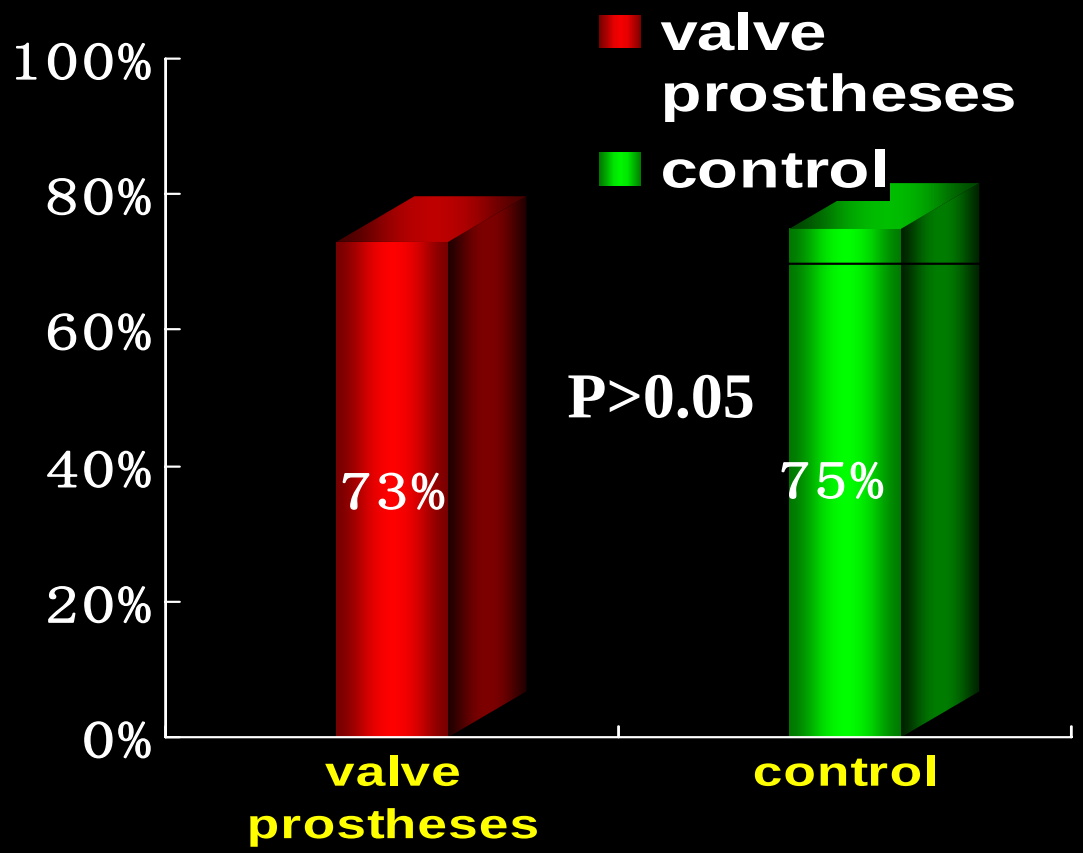
Oral.Circulation.2006:759

Catheter ablation of AF with structral heart disease ?

- 700 AF pts，PAF 39.1%
- 309 pts（44.1%）concomitant with SHD
- F/U 9 months
- Success rate 74.8%
- SHD is not a predictor of AF recurrence in AF ablation

Verma. JACC.2005:285

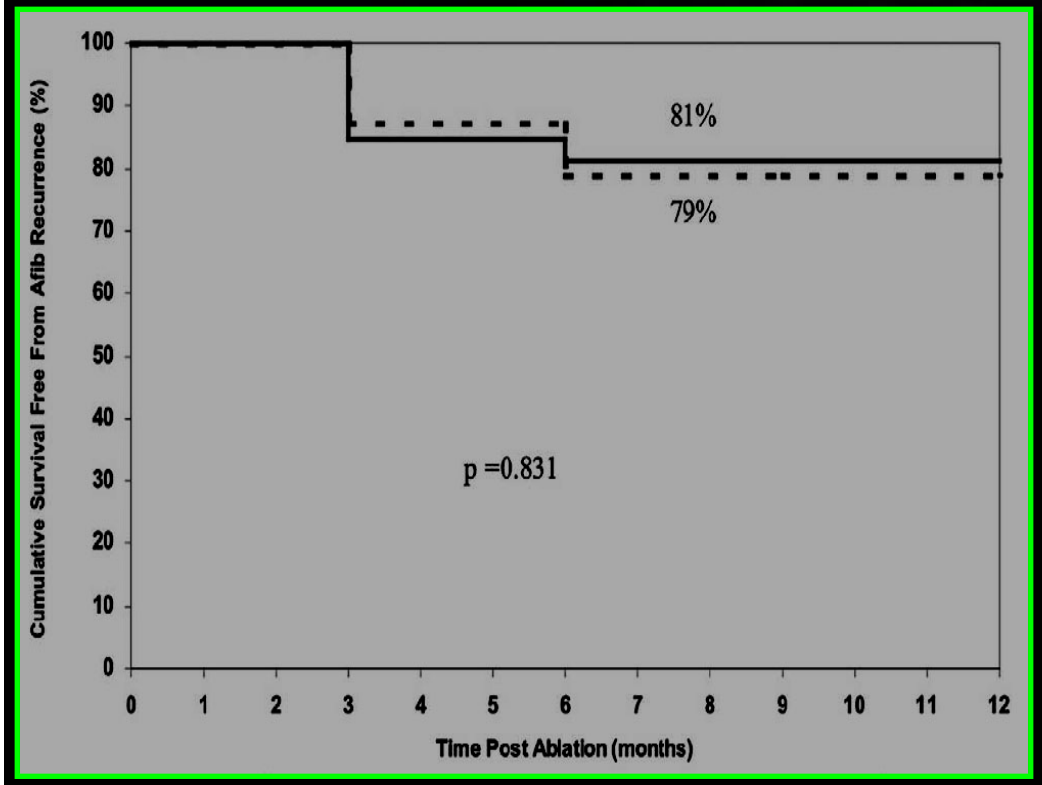
Catheter ablation of AF in patients with mitral valve prostheses and enlarged atria ?



- It is effective
- longer X-ray time
  35.3 mins vs 20.9mins
- 1 case TIA,1 case pseudoaneurysm in valve protheses

Pappone.JACC.2005:868

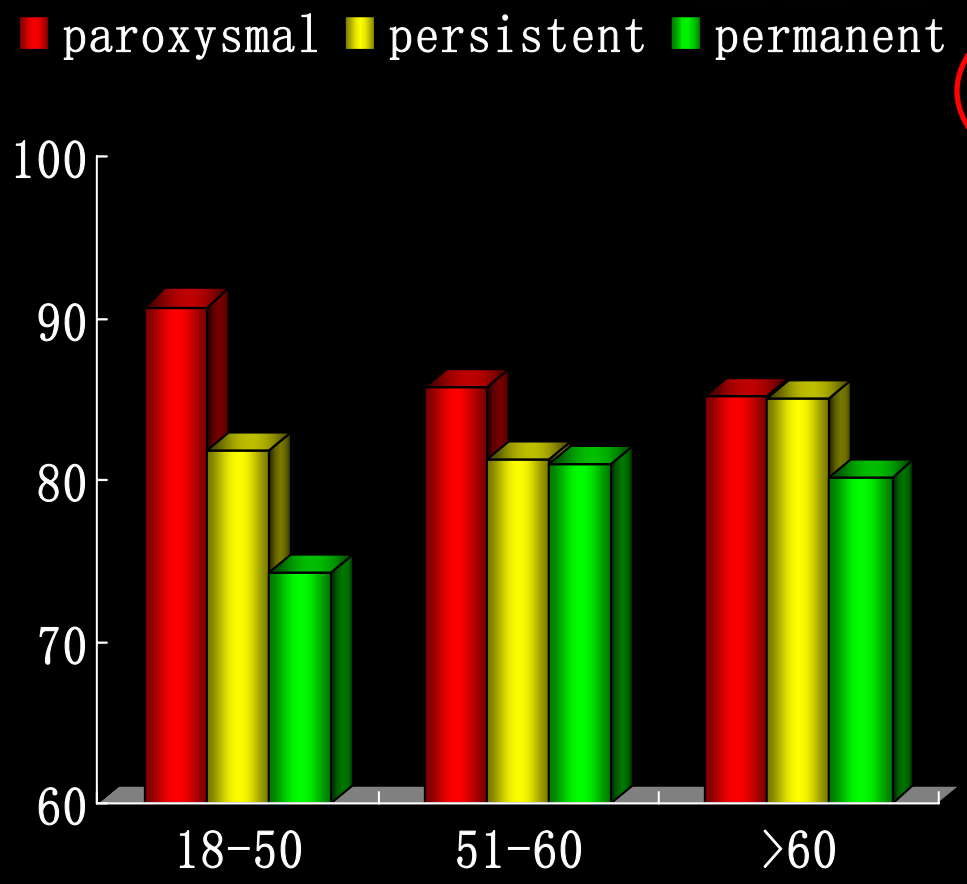
Catheter ablation of AF in patients with pacemakers?



- 71 pacemaker pts,15 ICD pts，86 control pts
- 25% generator malfunctioning occurred <60s, No permanent generator malfunctioning
- Atrial lead dislodgment in 2 pts
- No difference in success rate ,ablation time,X-ray time, success rate

Lakkireddy. Heart Rhythm .2005:

Impact of age on the outcome of catheter ablation?



Young:18 yrs

AF center in Anzhen

Old: 80 yrs

- No difference in success rate,incidence of complications
- Significant difference in procedure time

Bhargava.JCE. 2004:8

CONTROVERSIES IN CARDIOVASCULAR MEDICINE

Circulation. 2005; 112: 1214-1231

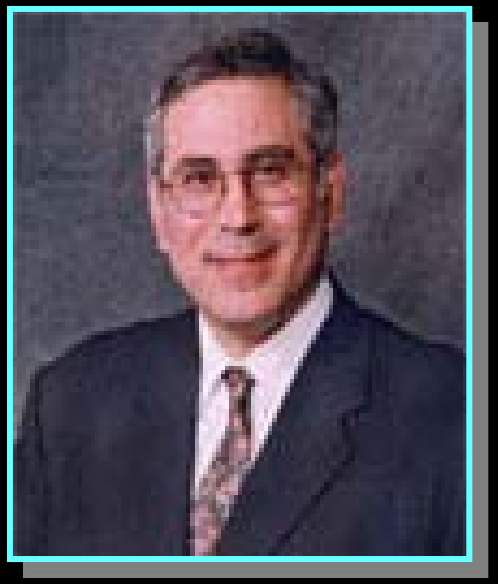
Should atrial fibrillation ablation be considered first-line therapy for some patients?

YES

Dr. Natale
Chief, EP section
Cleveland Heart Center

VS

NO



Dr. Prystowsky
Vice-Chair, HRS
Editor-in-Chief, JCE

中华医学会系列杂志
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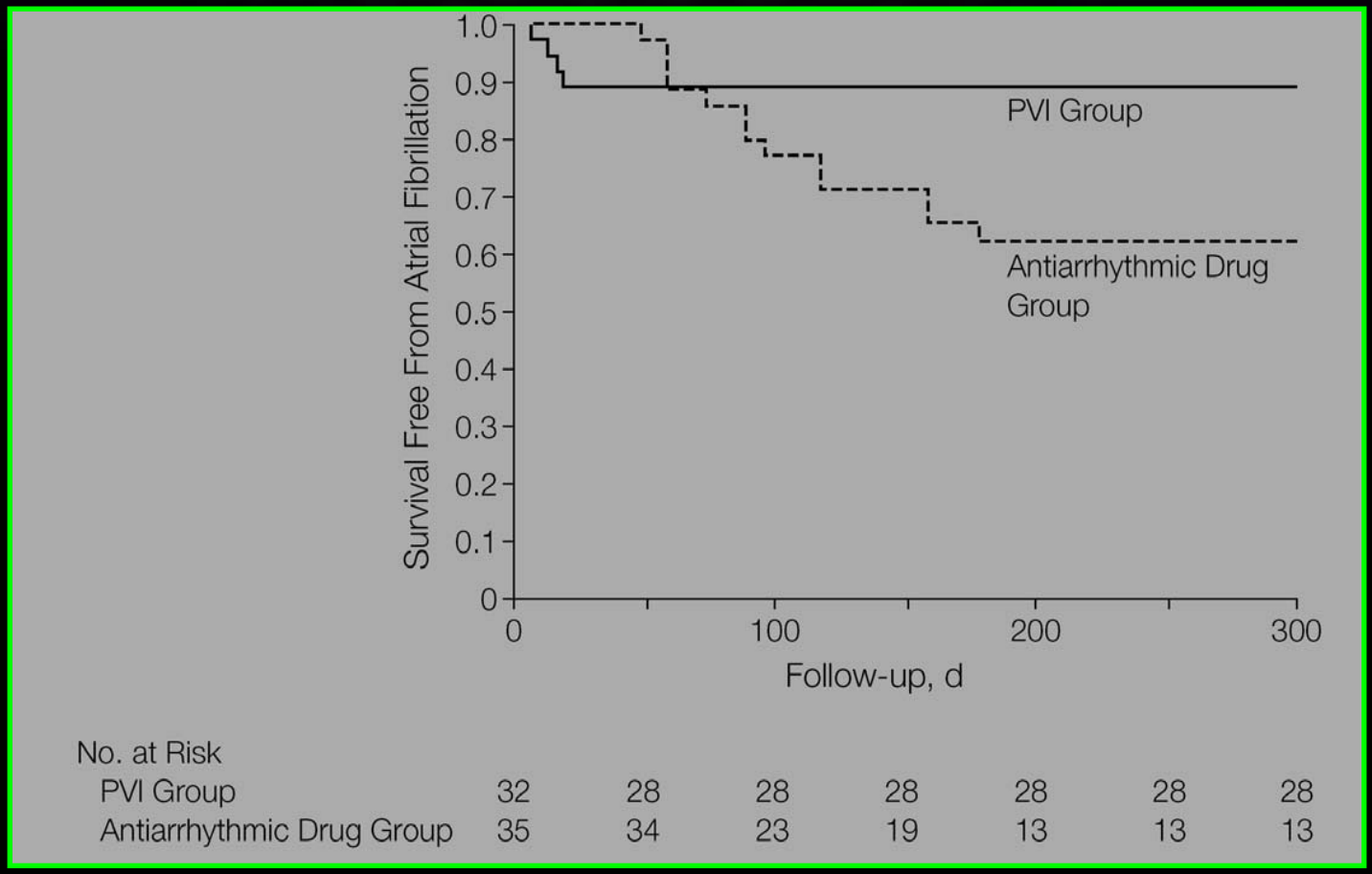
2005:1050-1054
中华心血管病杂志®

YES

VS

NO

Catheter ablation is superior to AAD as first-line therapy



Wazni. JAMA 2005:2634

First-line therapy：controversy in guideline

- CSPE

  Current knowledge and management of AF 2006

- Catheter ablation should be considered as first-line therapy in experienced centers for recurrent PAF patients who are <75 yrs old, without or mild SHD,LA diameter<50mm

Chinese Journal of Cardiac Arrhythmias.2006:167

First-line therapy：controversy in guideline

- ACC/AHA/ESC **Guideline 2006**
- Catheter ablation appears as an option for treatment of PAF in patients who have failed ⩾1 course of an AAD regimen ⟶ second-line therapy
- If patients remain symptomatic with heart rate control and antiarrhythmic medication is either not tolerated or ineffective, then LA ablation may be considered

Fuster. Circulation.2006 :e257

Why is catheter ablation not an established first-line therapy in ACC/AHA/ESC guideline

- EBM was the foundation of the guideline.Data on catheter ablation of AF were not sufficient
- The difference of the roles that drugs and catheter ablation played in AF was due to the difference between the evidence of the two strategies
- Catheter ablation may be considered mainstream therapy,when achieved more evidence

AF Ablation as first-line therapy?
(Catheter Ablation vs. Antiarrhythmic Drug Therapy for Atrial Fibrillation Trial, CABANA)

- Ongoing NIH sponsored CABANA study: mortality study of AF ablation vs. antiarrhythmics vs. rate control/coumadin as first-line therapy for AF
- Main study to enroll 3,000 patients at 100 centers
- Patients will be followed for 2.5-5 years


Thanks !