

38^{ème} CONGRÈS NATIONAL
DE CARDIOLOGIE
ET DE CHIRURGIE
CARDIO-VASCULAIRE

Joint au

2^{ème} CONGRÈS
DES SOCIÉTÉS AFRICAINES
DE CARDIOLOGIE



Ablation de la Fibrillation Atriale dans l'Insuffisance Cardiaque

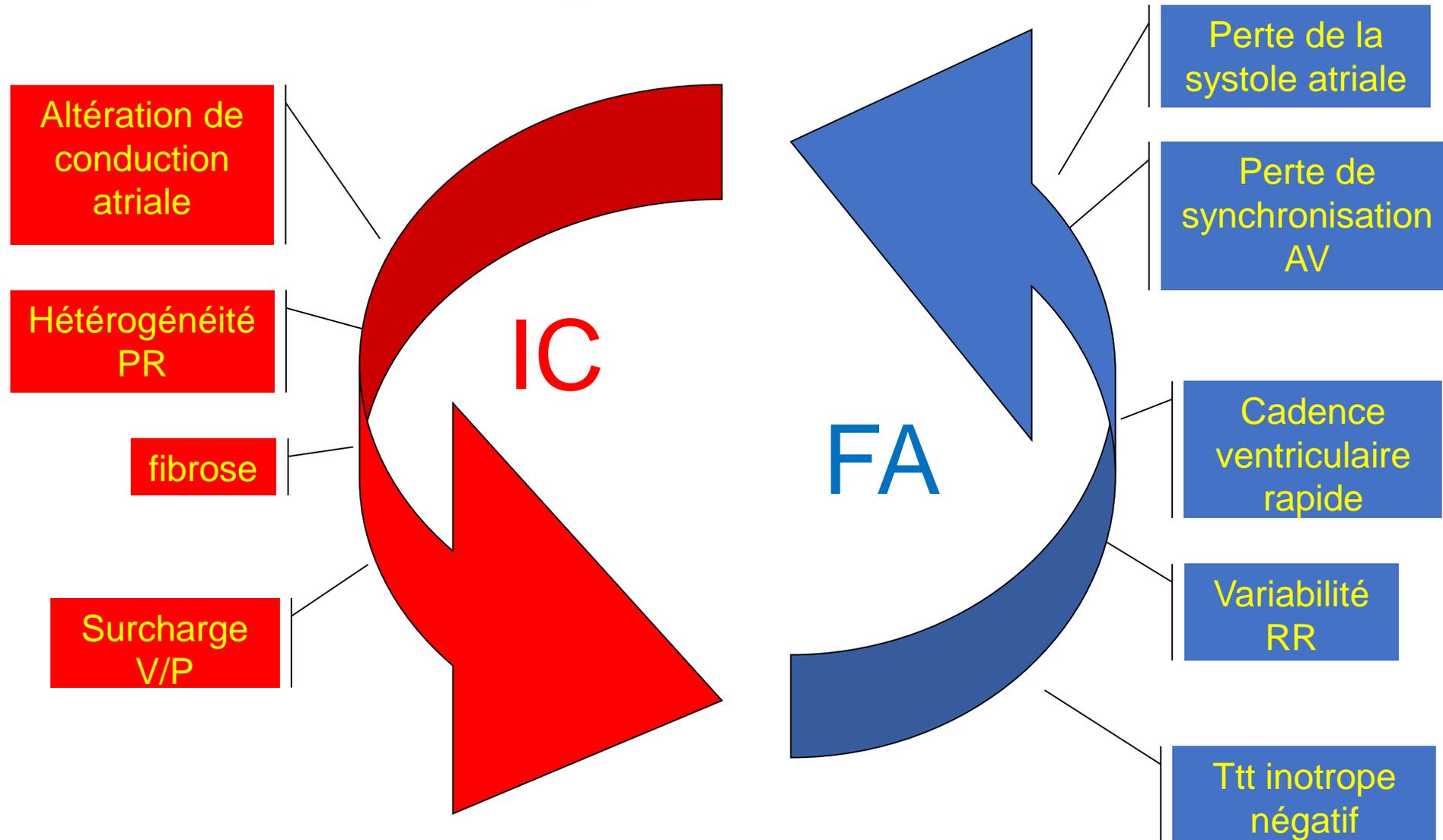
Frédéric A. SEBAG
Paris , FRANCE



Déclaration de conflits d'intérêts

Aucun

Physiopathologie



Mr C.O. 66 ans

HTA , Dylipidemie

Insuffisance cardiaque sur OAP initial

FE 35%

Rythme sinusal QRS fin

Coronarographie: Tritronculaire

Mr A.R. 64 ans

HTA, Dylipidemie

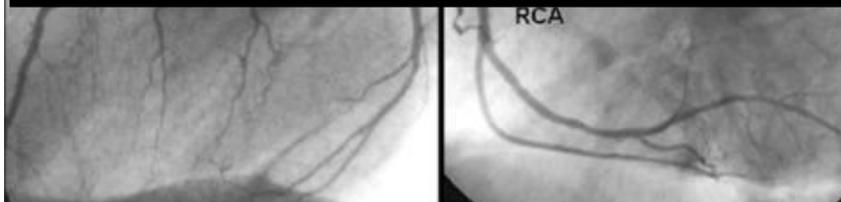
Insuffisance cardiaque sur OAP initial

FE 35% Coronaires saines

ECG en FA QRS fins



Pourquoi ne pas ablater (d'emblée)?



Que faire en plus du ttt de l'ins. cardiaque?

A: ttt medical (β -, Statine, Aspirine/DAPT...)

B: ttt medical + Revascularisation

C: Rien, ça va passer...



Que faire en plus du ttt de l'ins. cardiaque et de l'anticoagulation?

A: ttt ralentisseur (bb/Digoxine)

B: Cardioversion et amiodarone

C: ablation d'emblée

D: Rien, ça va passer...

Pourquoi ne pas ablater (d'emblée)?

Parce que c'est complexe

Parce que ça ne marche pas

Parce que ça coute cher

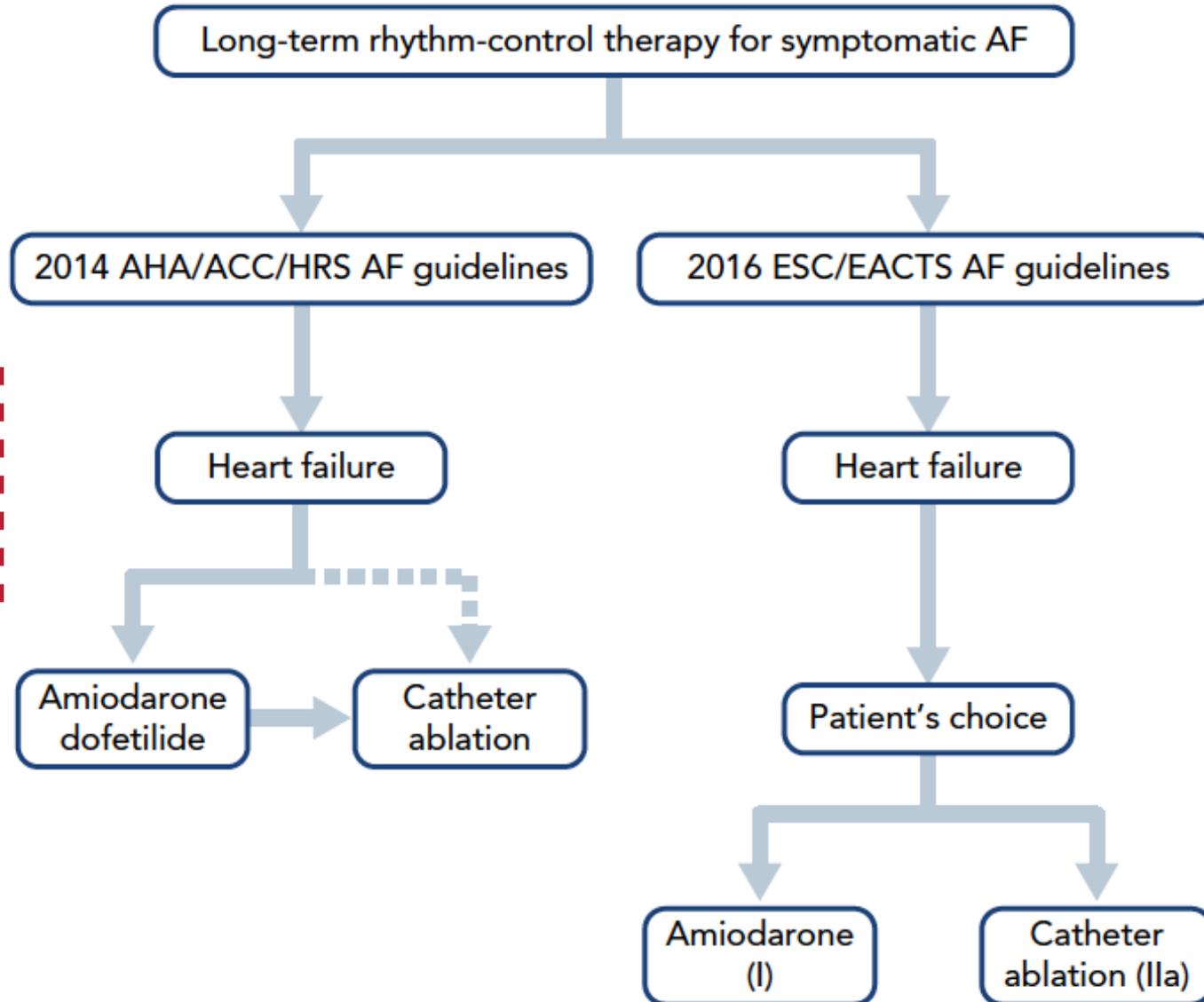
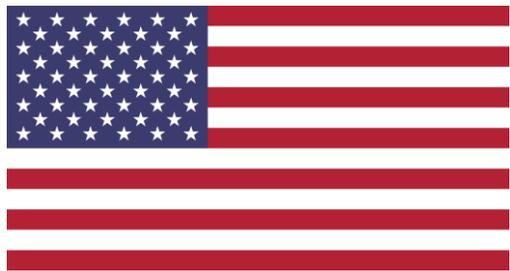
Parce que c'est un problème d'ins Card

Parce que c'est dangereux

Parce qu'on a le temps de voir plus tard...

Parce que ce n'est pas recommandé!

Recommendations



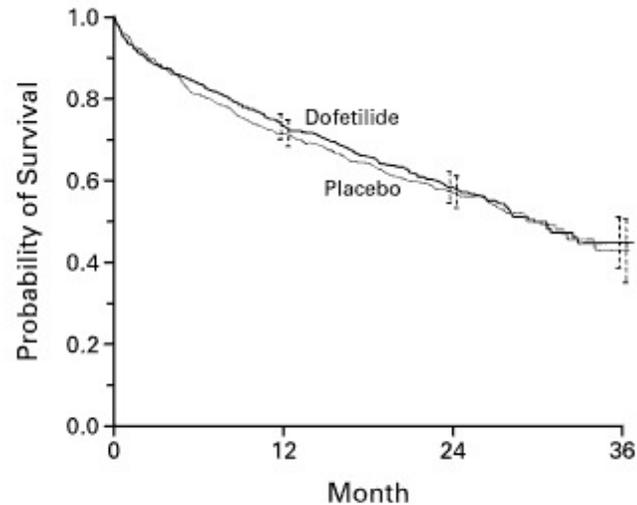
Pourquoi le rythme sinusal est si mal vu????

DIAMOND-CHF

1518 patients danois

FA et Ins Cardiaque III ou IV / FE<35%

Randomisé Dofetilide Vs Placebo



No. AT RISK				
Dofetilide	762	554	214	5
Placebo	756	536	199	1

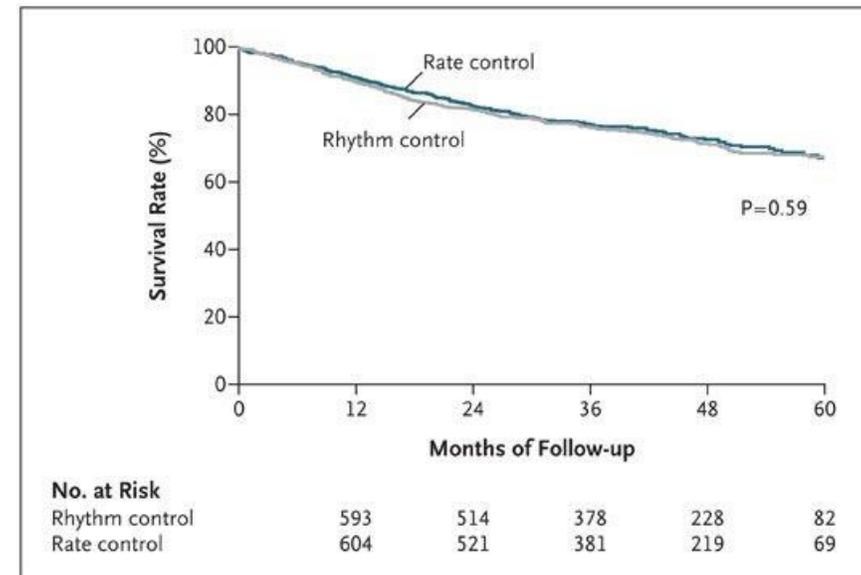
N Engl J Med 1999; 341:857-865

AF-CHF

1376 patients internationaux

FA et Ins Cardiaque II à IV / FE<35%

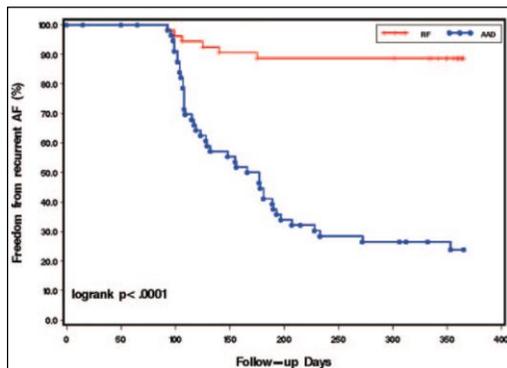
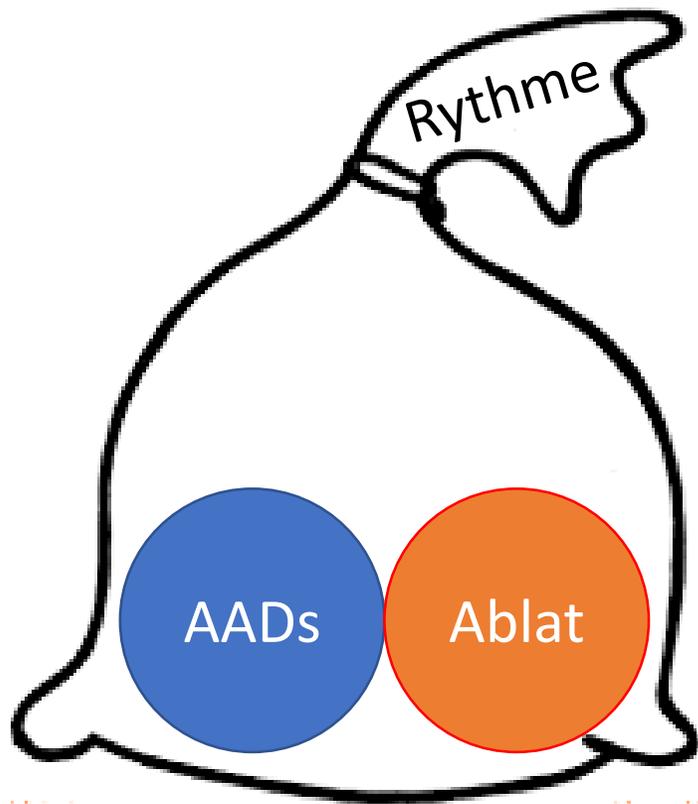
Randomisé Rate Vs Rhythm



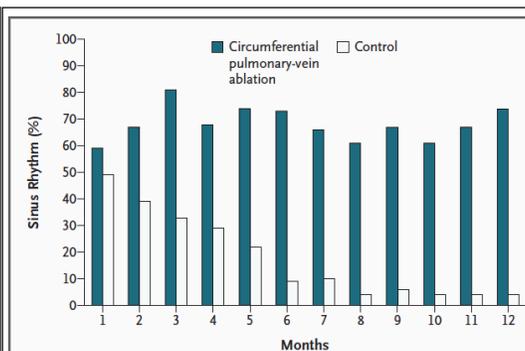
No. at Risk					
Rhythm control	593	514	378	228	82
Rate control	604	521	381	219	69

N Engl J Med 2008; 358:2667-2677

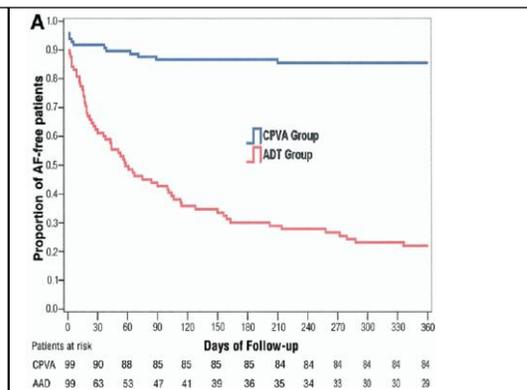
Pourquoi le rythme sinusal est si mal vu????



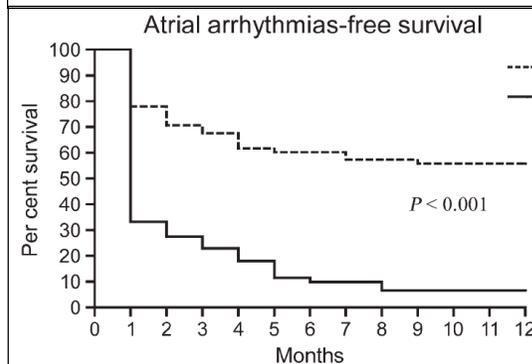
Circ 2008;118:2498-2505



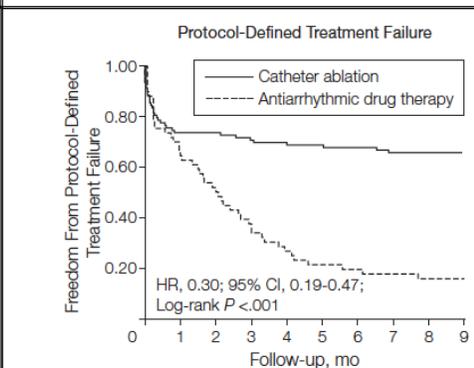
NEJM 2006;354:934-41.



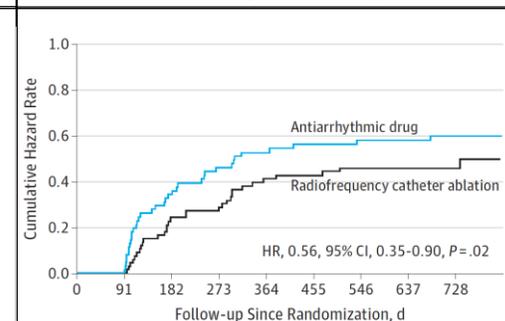
JACC Vol. 48, No. 11, 2006



EHJ (2006) 27, 216-221



JAMA 2010;303(4):333-340

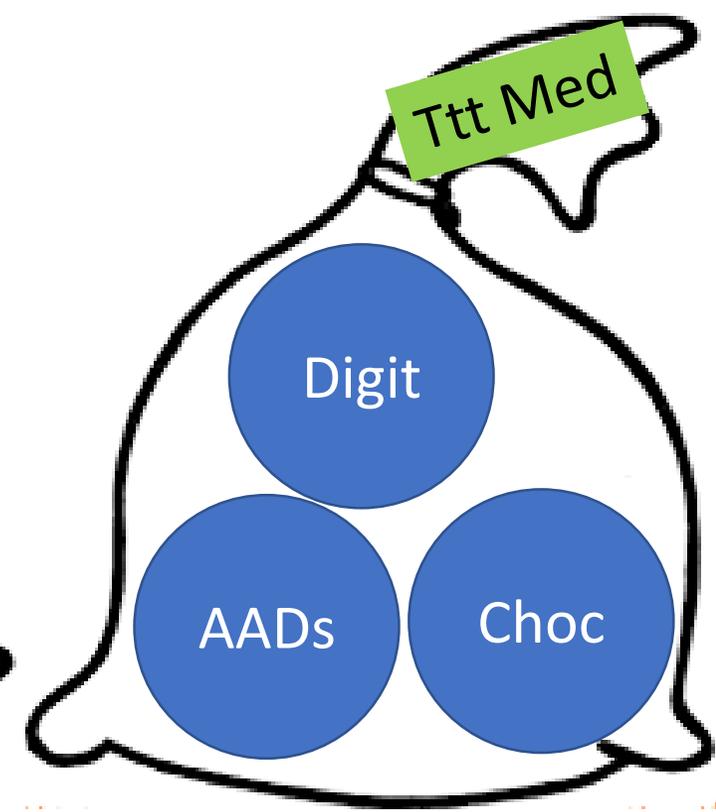
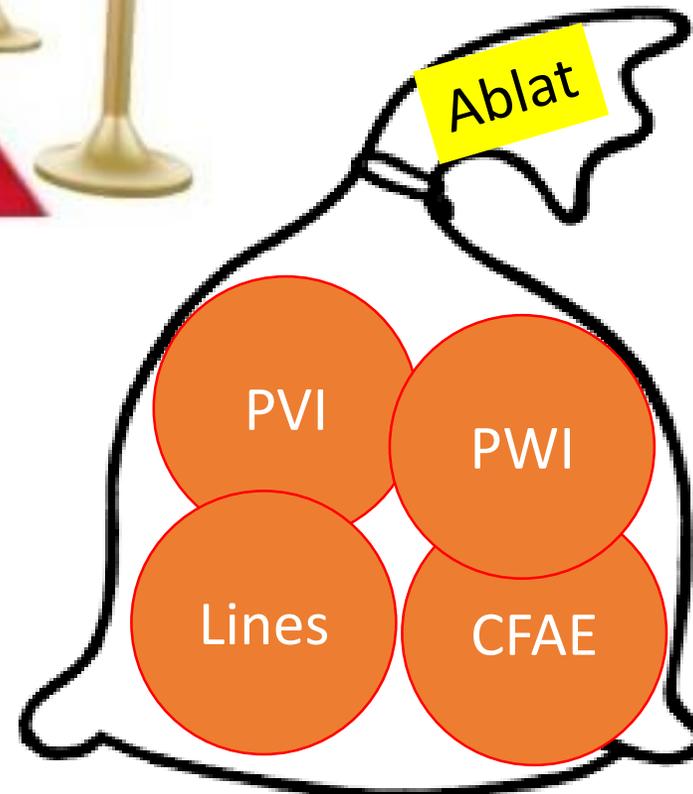


JAMA 2014;311(7):692-699

Historique de l'ablation de FA en IC

	2008	2013	2014	2016	2017	2018
	PABA-CHF	ARC-HF	CAMTAF	AATAC	CAMERA-MRI	
Technique	PVI	PVI±CFAEs ± Lines	PVI±CFAEs ± Lines	PVI±PWI± Lines	PVI±PWI	
Vs	AVN+biV	Rate Control	Rate Control	Amio	Rate Control	
Size	n=81	n=52	n=50	n=203	n=68	
f.u.	6 months	12 months	12 months	36 months	6 months	
Endpoints	EF/6MWT/ MLWHF	EF	VO₂	AF	EF	
Results	Ablation	No ≠	Ablation	Ablation	Ablation	

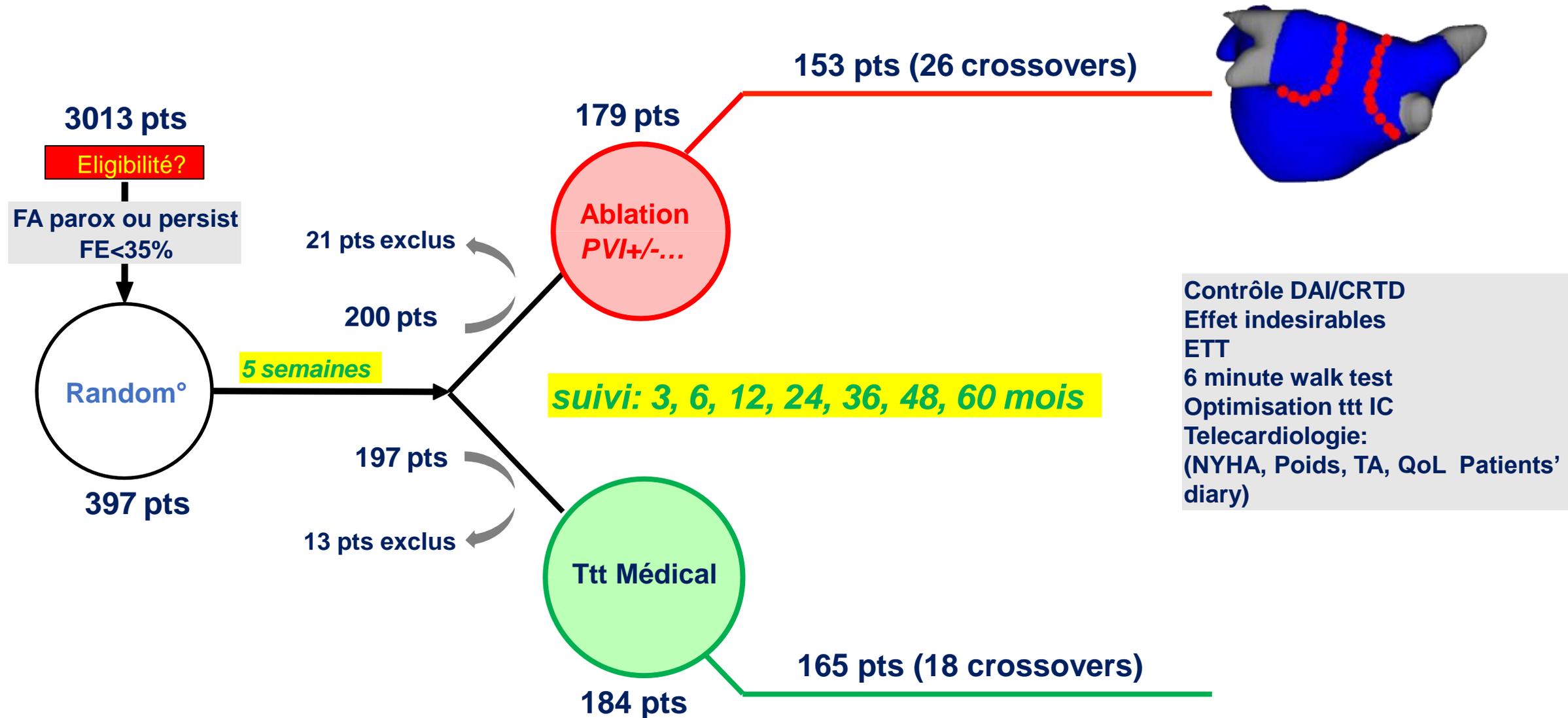
Et **ci** CASTLE-**AF** arriva....



Study Design— CASTLEAF



- Essai thérapeutique contrôlé randomisé (31 sites, 9 pays),

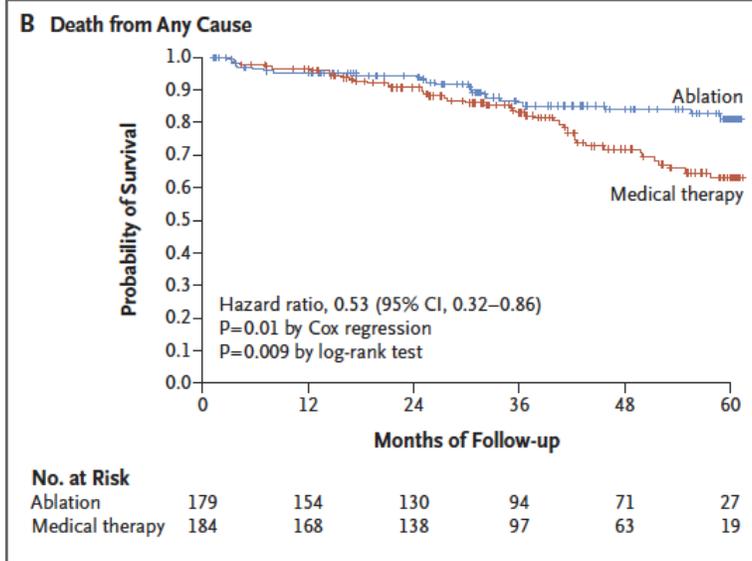
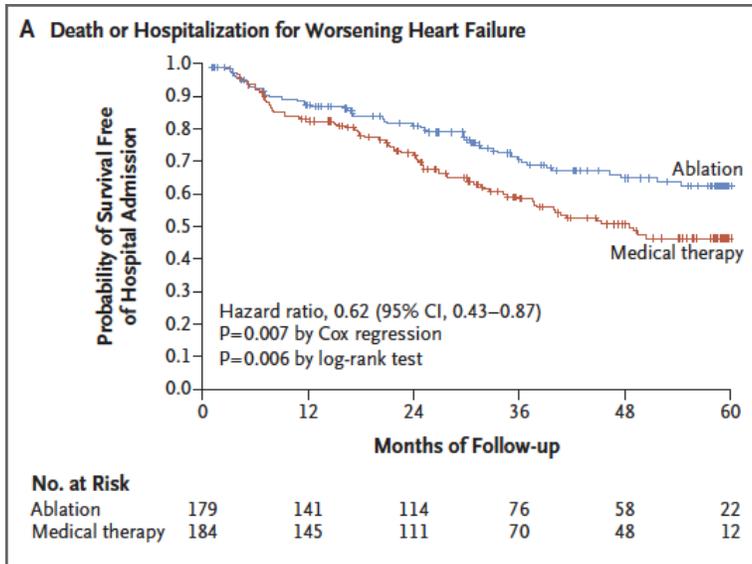




Patients CASTLE AF

	Ablation (179 patients)	Medical (184 patients)
Age – years	64 (5671)	64 (5673.5)
New York Heart Association class		
I (%)	11	11
II (%)	58	61
III (%)	29	27
IV (%)	2	1
Left ventricular ejection fraction – %	32.5 (25.038.0)	31.5 (27.037.0)
Left atrial diameter– mm	48	49.5
Current type of atrial fibrillation		
Paroxysmal (%)	30	35
Persistent (%)	70	65
Long standing Persistent (%)	28	29
CRTD implanted (%)	27	28

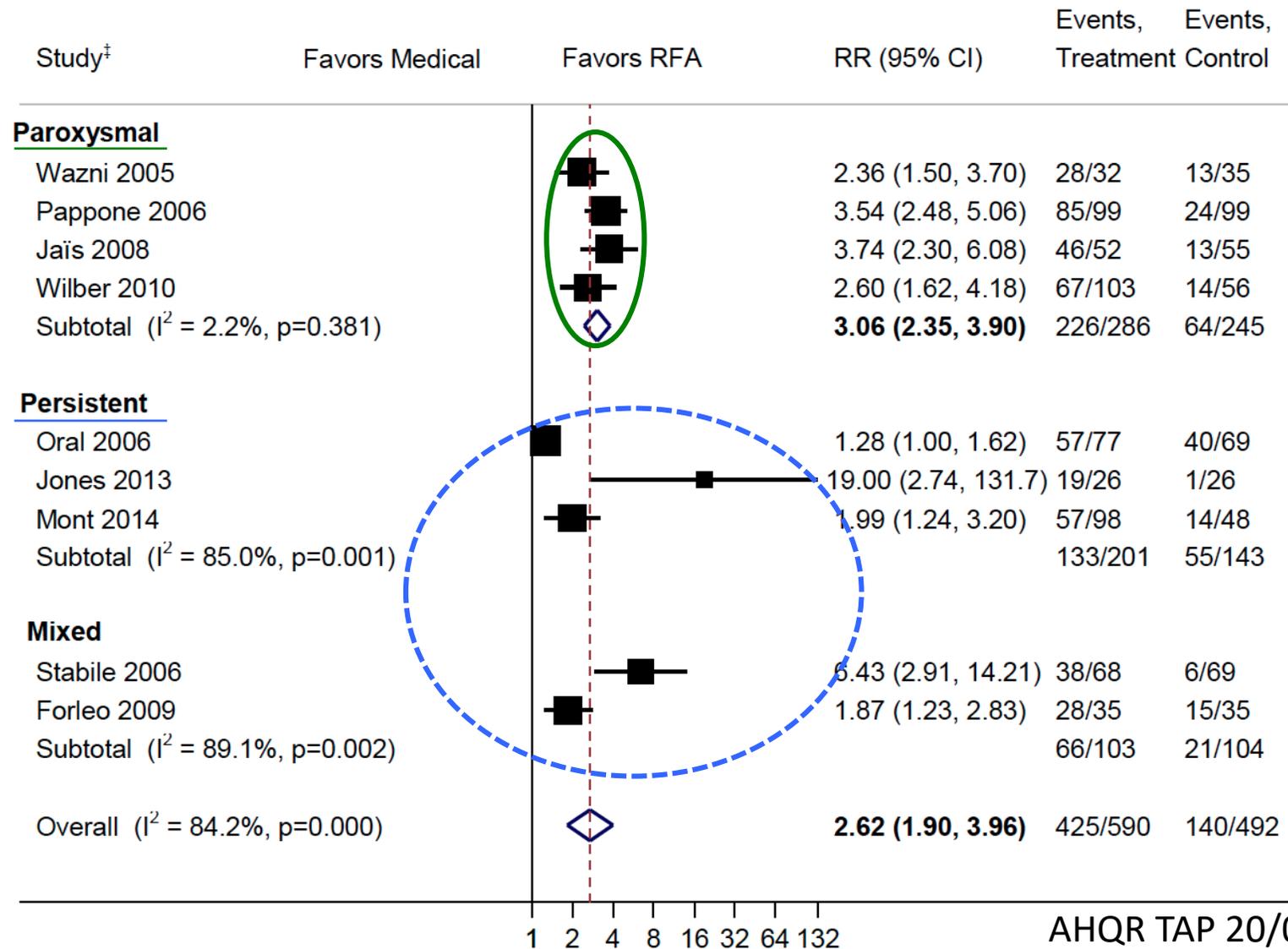
Castle AF Résultats



Subgroup	Ablation no. of events/no. of patients	Medical Therapy no. of events/no. of patients	Hazard Ratio (95% CI)	P Value for Interaction
Type of atrial fibrillation				
Paroxysmal	17/54	34/64	0.60 (0.34–1.08)	0.90
Persistent	34/125	48/120	0.64 (0.41–0.99)	
CRT-D implanted				
No	37/131	57/132	0.65 (0.43–0.98)	0.60
Yes	14/48	25/52	0.54 (0.28–1.04)	
ICD indication				
Primary	43/160	72/163	0.57 (0.39–0.83)	0.20
Secondary	8/19	10/21	1.03 (0.41–2.62)	
Sex				
Female	9/23	12/29	0.93 (0.39–2.21)	0.36
Male	42/156	70/155	0.58 (0.39–0.84)	
Age				
<65 yr	18/96	34/99	0.48 (0.27–0.85)	0.17
≥65 yr	22/82	48/85	0.70 (0.50–1.23)	
LVEF				
<25%	20/34	15/27	1.36 (0.69–2.65)	0.01
≥25%	29/130	61/145	0.48 (0.31–0.74)	

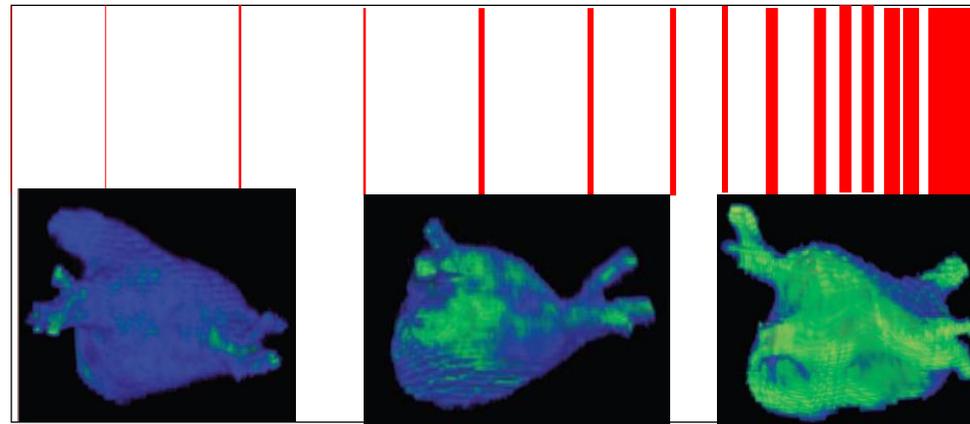
Cause of heart failure	Ablation no. of events/no. of patients	Medical Therapy no. of events/no. of patients	Hazard Ratio (95% CI)	P Value for Interaction
Cause of heart failure				
Nonischemic	26/107	29/88	0.74 (0.43–1.25)	0.56
Ischemic	25/72	53/96	0.60 (0.37–0.97)	
Diabetes				
No	32/136	48/117	0.52 (0.33–0.81)	0.06
Yes	19/43	34/67	1.01 (0.58–1.78)	
Hypertension				
No	12/50	19/48	0.59 (0.28–1.21)	0.88
Yes	39/129	63/136	0.63 (0.42–0.93)	
Amiodarone use				
No	37/122	61/133	0.65 (0.43–0.97)	0.66
Yes	13/55	18/46	0.55 (0.27–1.13)	
Digitalis use				
No	41/146	52/124	0.65 (0.43–0.98)	0.68
Yes	9/31	27/56	0.56 (0.26–1.19)	
Beta-blocker use				
No	4/12	4/9	1.01 (0.25–4.05)	0.47
Yes	46/165	75/171	0.60 (0.42–0.87)	

Discordances entre FA parox et peristante

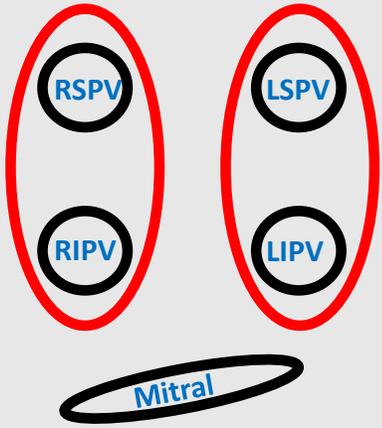
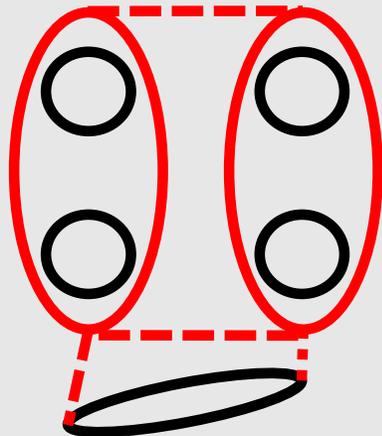
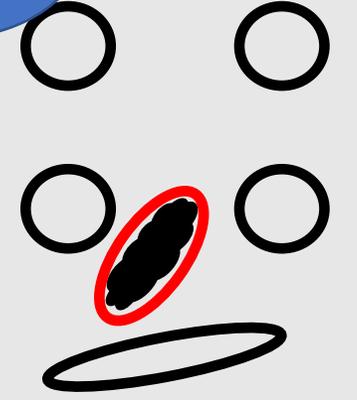


Deuxième regard vers les recommandations....

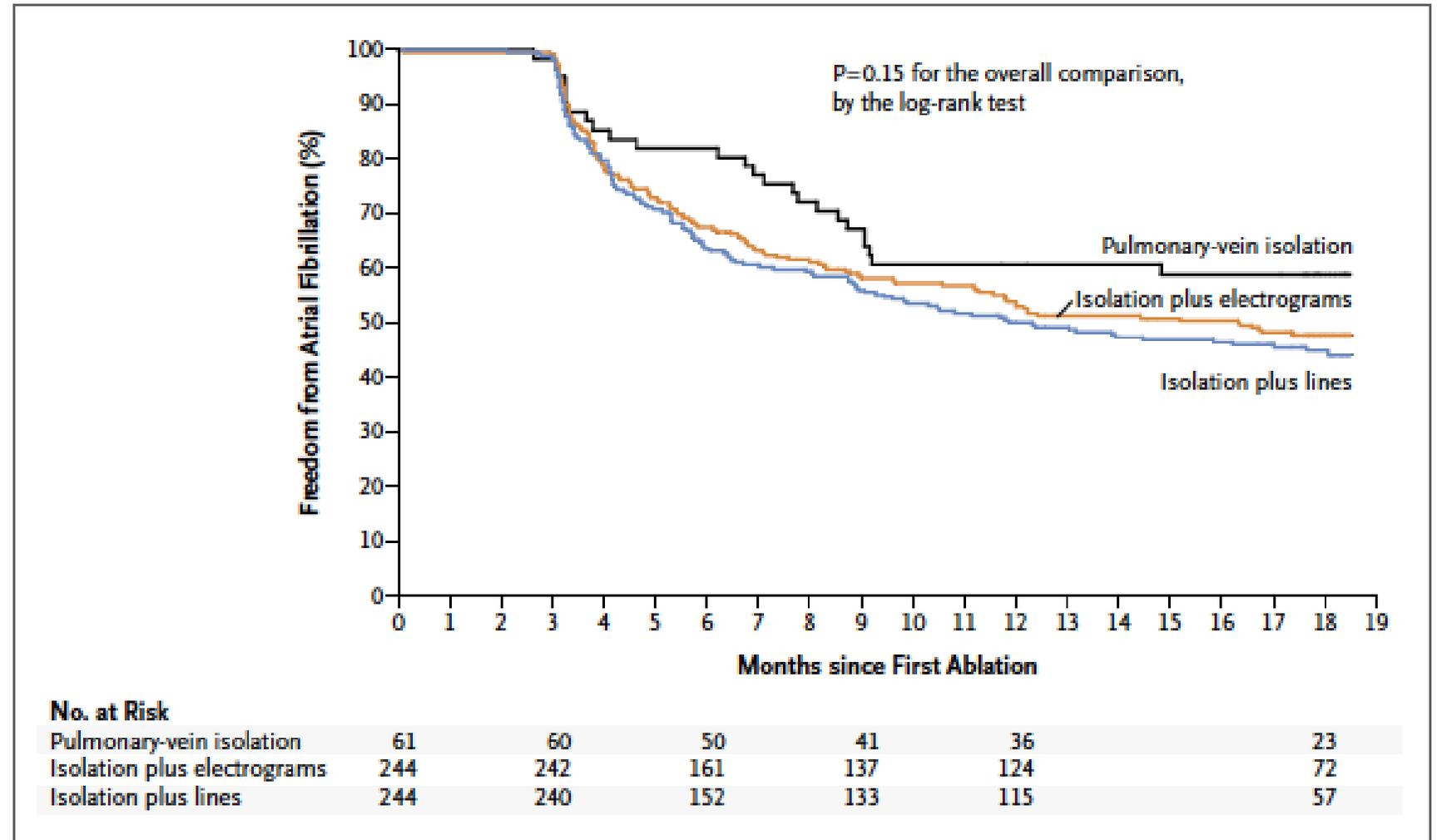
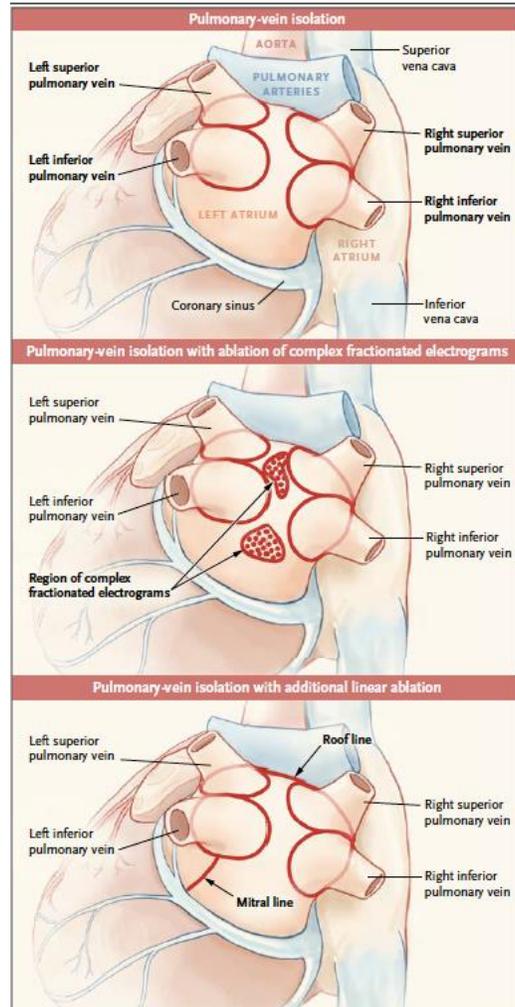
Factors that have been identified as predictors of a poorer outcome, at least in some studies, include (1) **non-PAF** and particularly long-term persistent AF; (2) sleep apnea and obesity; (3) **increased LA size**; (4) increased age; (5) hypertension; and (6) LA fibrosis as detected by cardiac MRI.³⁶⁵



Comment ablater la FA persistante?

PAF	(LS)PsAF		
PVI	Lines	CFA	BIFA
			
AntalPV Block	AF Conversion? SR?		

Mauvaises nouvelles pour la FA persistante



Mauvaises nouvelles pour la FA persistante

Technique	Class-LOE
Isolation VP	I-A
Ablation flutter concomittant	I-B
Lignes	IIb-C
Isolation du mur posterieur	IIb-C
Domain Frequency Ablation	IIb-C
Ablation BIFA	IIb-B
Ablation CFAEs	IIb-B
Ablation de rotors	IIb-B
Ablation ganglions	IIb-B

Malgré STAR-AF 2, les experts continuent à...

tion during repeat procedures. Ten percent of the writing group members routinely employ CFAE-based ablation as part of an initial ablation strategy in patients with persistent and long-standing persistent AF, and 26% incorporate CFAE-based ablation for redo procedures in this subset of patients. Based on this information and a review

defragmenter(10-25%)...

Isoler le mur posterieur(20-40%)

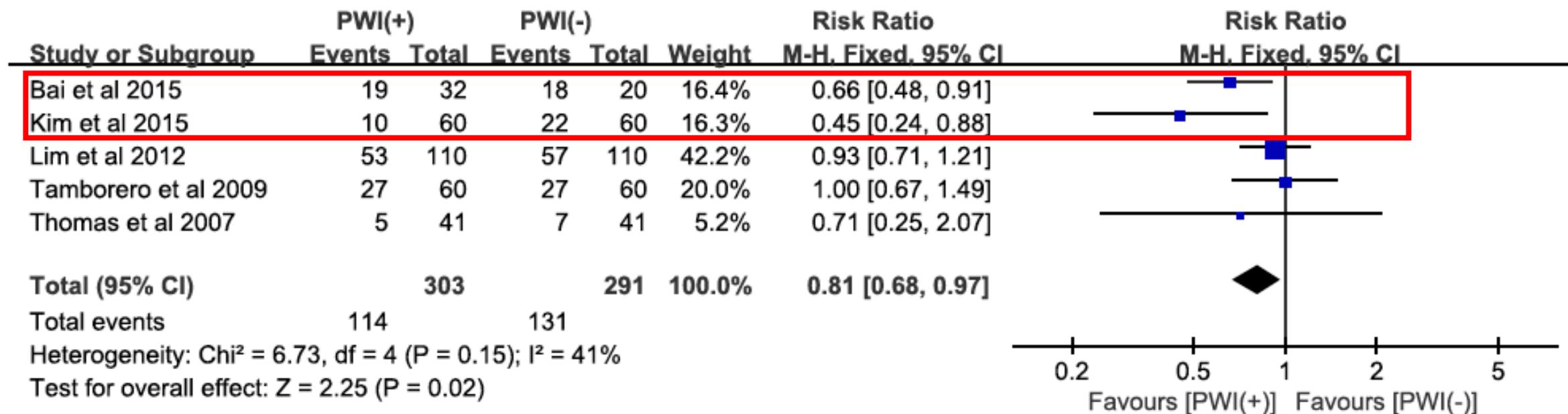
AF also remains controversial.⁵⁰⁸ For patients with persistent or long-standing persistent AF, 22% of the writing group members perform posterior wall isolation at the time of an initial AF ablation procedure and 38% of the writing group members perform posterior wall isolation for repeat AF ablation procedures in patients with persistent and long-standing persistent AF. Based on this information and

alone.⁵⁰⁹ For patients with persistent or long-standing persistent AF, 25% of the writing group members perform linear ablation at the time of an initial ablation procedure, increasing to 45% when redo procedures are performed in patients with persistent and long-standing persistent AF. The writing group recognizes that the usefulness of linear ablation lesions in the absence of macroreentrant AFL is not well established (Class IIb, LOE C-LD). For patients with PAF,

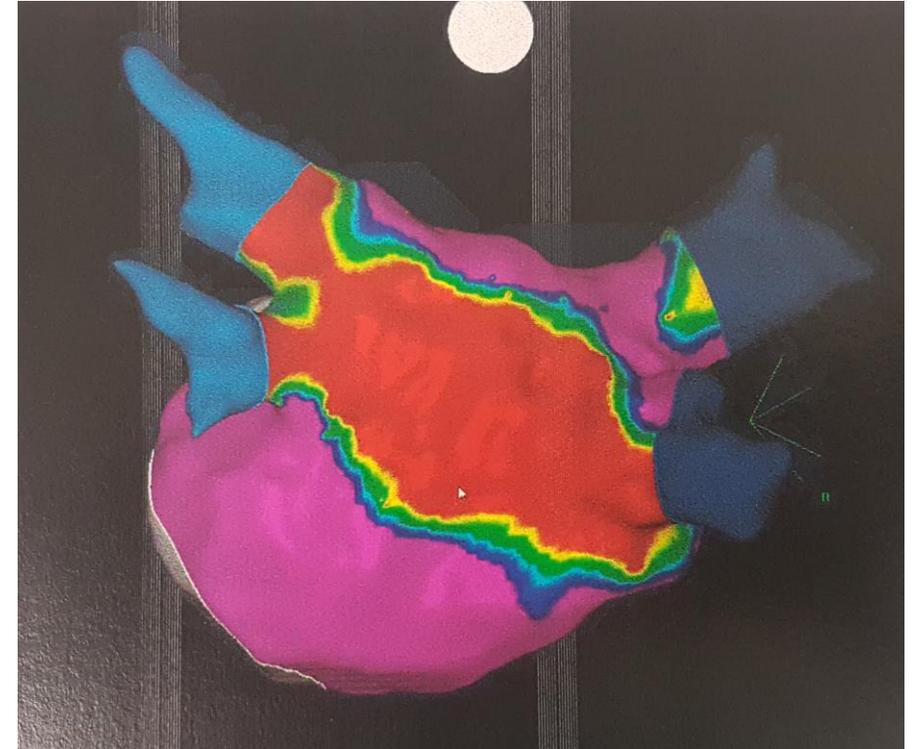
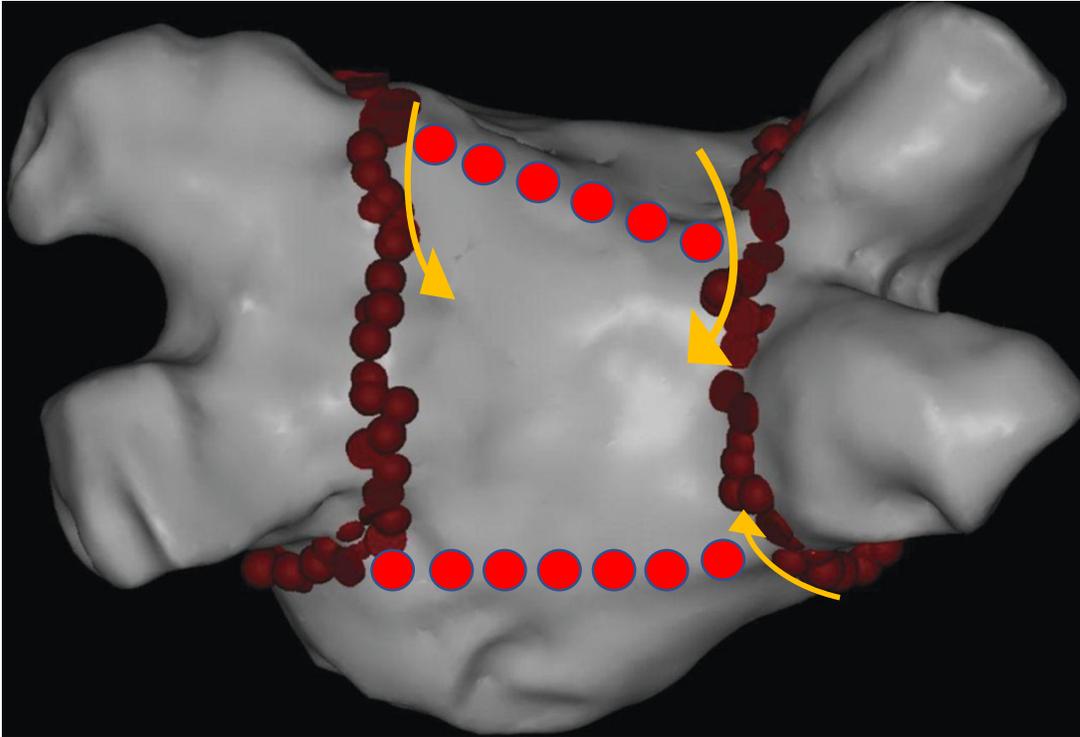
Faire des lignes(25-45%)

L'isolation du mur posterieur (PWI ou Box)

**Metaanalyse de 5 études
594 patients**

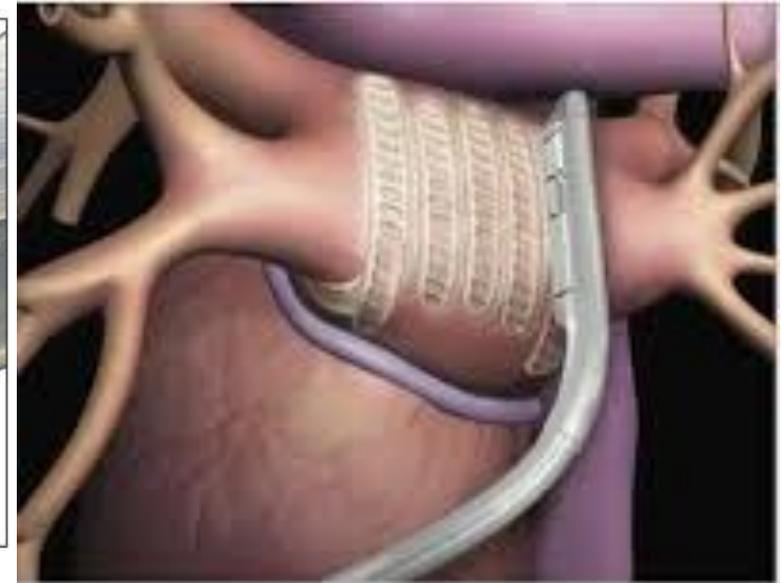
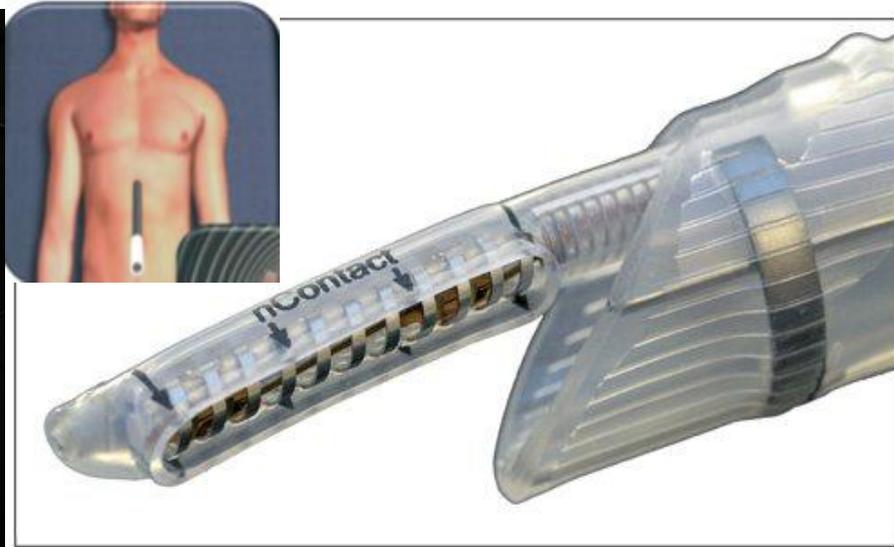


L'isolation du mur postérieur peut être difficile dans la FA persistante avec des OG de gros volumes



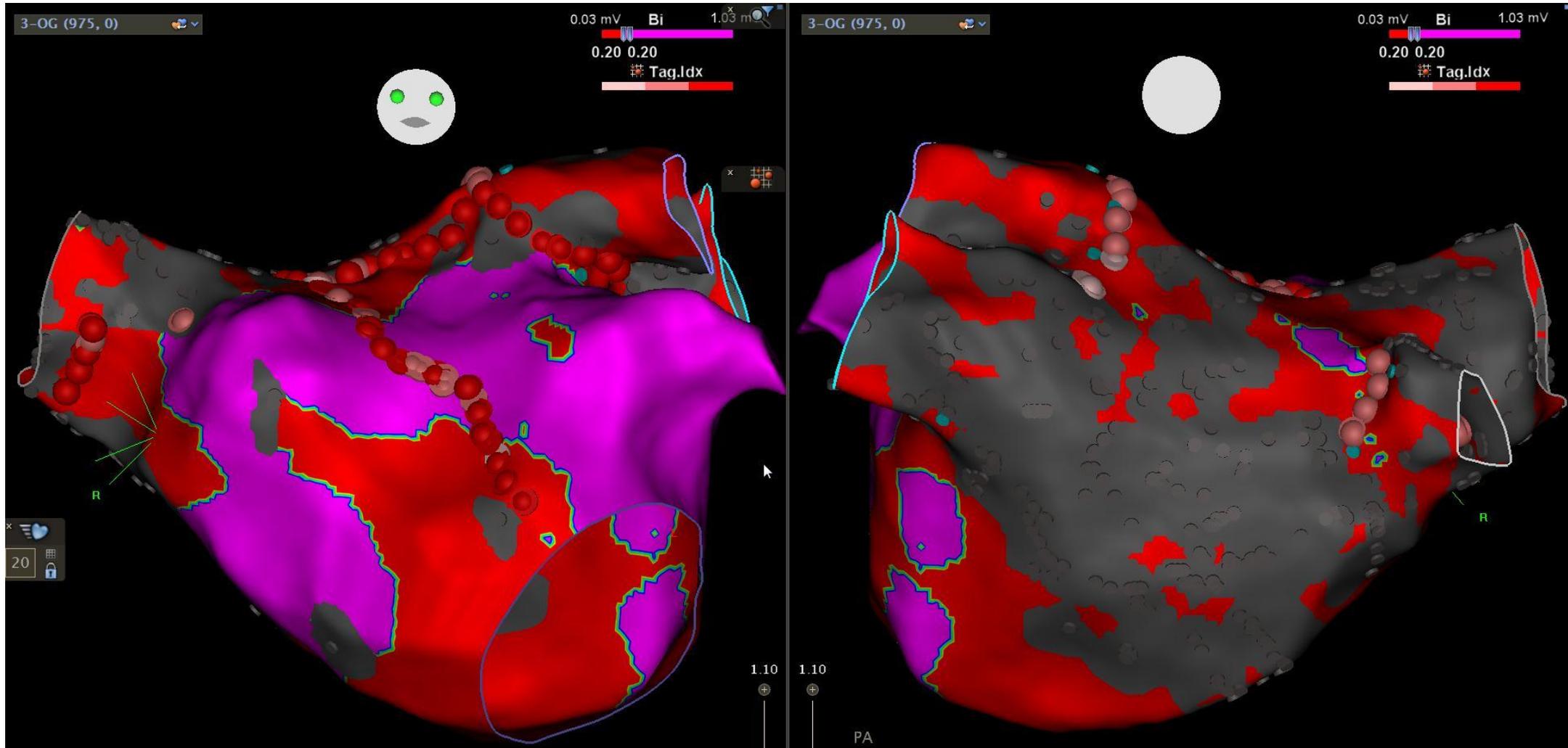
Ablation mur postérieur OG épicardique

Approche hybride



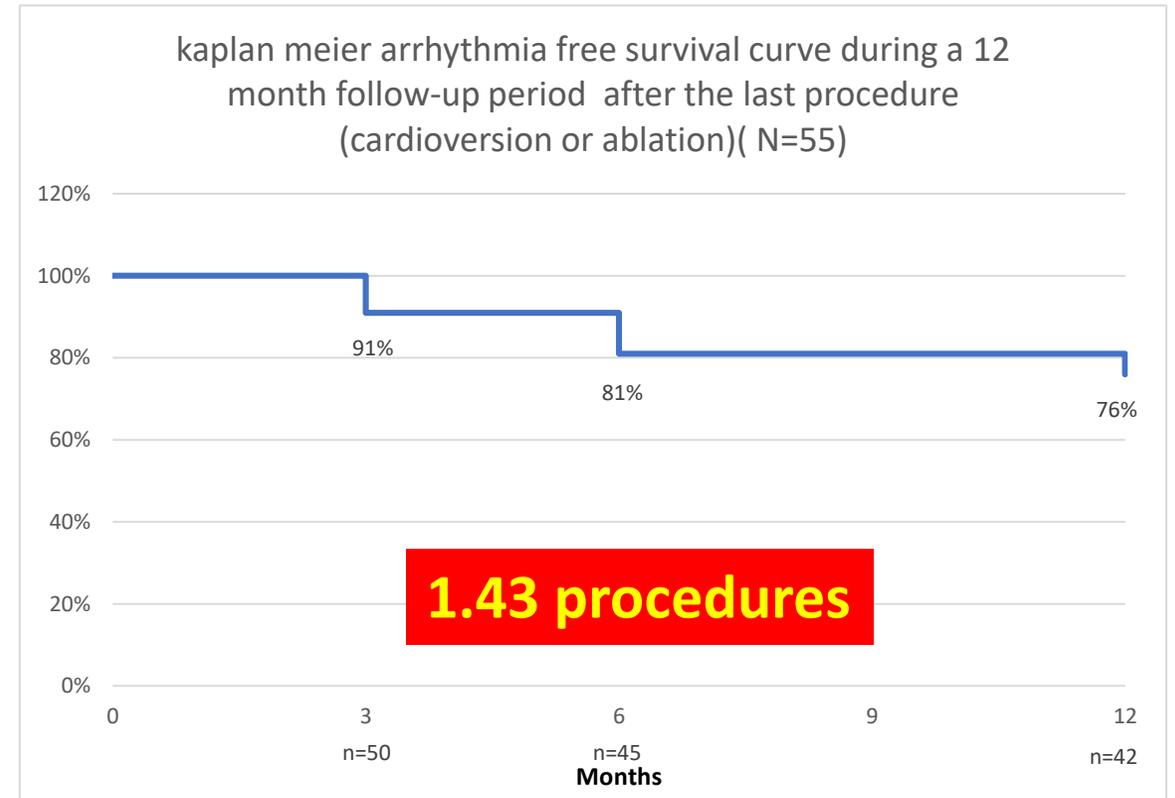
Ablation mur postérieur OG épicardique

Approche hybride



Notre experience

- 55 patients FA persistante longue durée
- Diametre OG moyen: 47mm
- Ancienneté de FA: 7 ans
- Durée de FA: 14 mois
- **Insuffisance cardiaque 72%**
- **Env. 2.5 echecs de procedure endo**
- IMM/Mondor
- Suivi 1 an(Holter à 6 -12 mois)



En conclusion

- Il faut proposer une ablation de FA aux insuffisants cardiaques
 - Sauf FE <25%
 - Chez des patients plutôt jeunes
- Décloisonner l'ablation des stratégies médicamenteuses de contrôle du rythme
- Ablation (intellectuellement) difficile
 - Le plus souvent FA persistante
 - Approche hybride intéressante



**Merci pour
votre
attention**



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