

# Factors Influencing Recurrent Atrial Fibrillation Occurrence Late After The Maze Procedure

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# DISCLOSURE

No authors have any financial interest  
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# Preoperative patient characteristics

	N=247
Age (y)	63±11
Males	129(52%)
Atrial Fibrillation Type:	
Permanent	86(37%)
Persistent	100(43%)
Paroxysmal	47(20%)
Atrial Fibrillation Time (years):	4.7±6
< 1	50(22%)
1-5	86(38%)
5-10	55(25%)
>10	34(15%)
Left atrial volume > 200cm <sup>3</sup>	28(12%)

# Procedure

Maze III lesion set

**Bipolar RF** – transmularity  
- no collateral  
damage

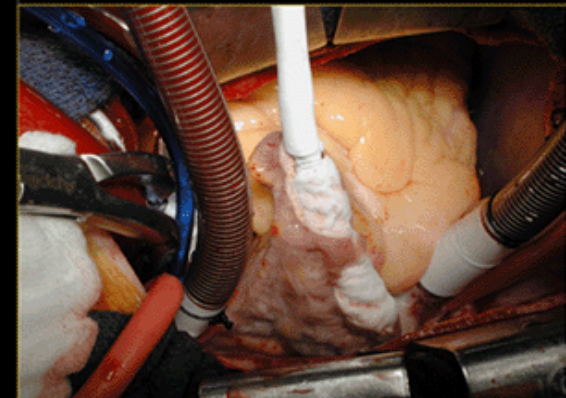
**Cryo-**

In areas where

bipolar RF is impossible  
(Left Atrial Isthmus and  
Mitral Valve Annulus) -



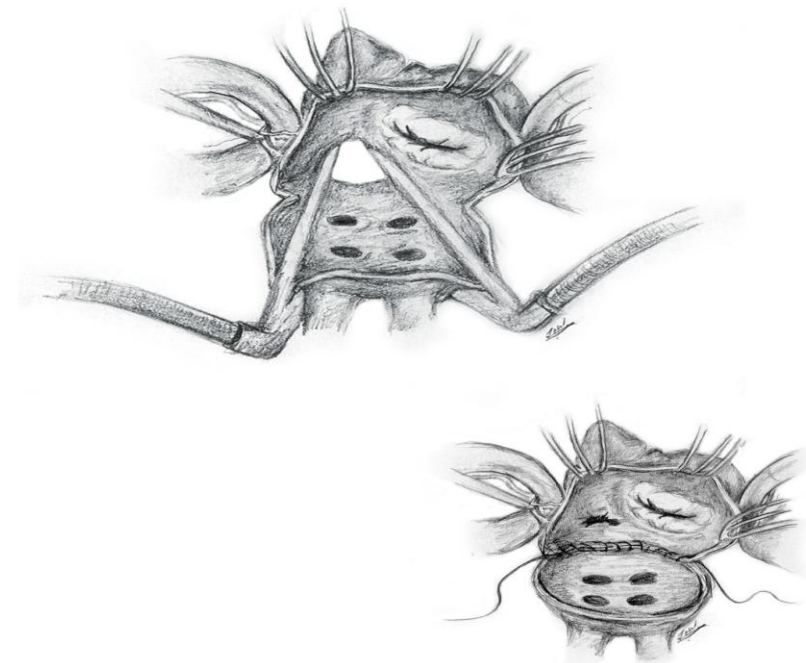
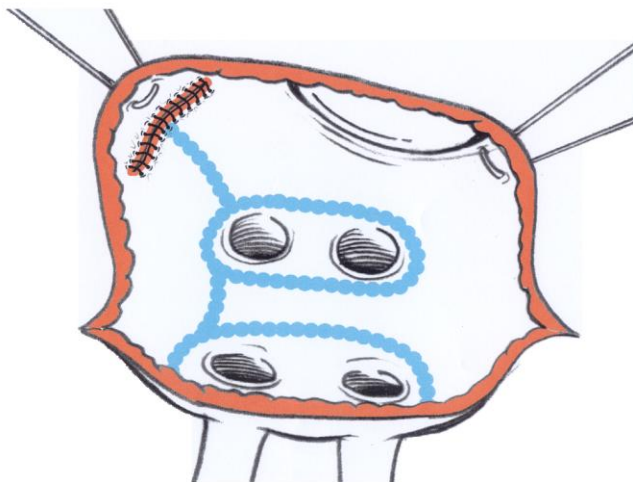
**Superolateral Right Atrium**



Including  
Epicardial Pulmonary Vein Isolation

Including  
Box Lesion

## Left Atrial Procedure Pulmonary Veins



Ref: Dr Hauw Sie, "The Surgical Treatment of Atrial Fibrillation"



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# Ablation type and operative data

	N=247
Ablation type:	
Right + Left Atria	59(24%)
Left Atrium	188(76%)
Operative data:	
Mitral replacement	107(43%)
Mitral repair	72(29%)
Non-mitral surgery	68(28%)
CPB time (min)	121±31
X-clamp time (min)	99±27

# Follow-up Protocol

- Surgeon/Electrophysiologist
- 1, 3, 6 and then every 6 month
- Holter ECG, Echo, Atrial Contractility?
- “AF Alarm”



# Early and Mid-term Results

Rhythm at follow-up 6 months (n=216):	
Sinus	180(83%)
Atrial fibrillation/Flutter	36(17%)
Sinus Without AAD	91(51%)
Sinus Without Coumadin	137(76%)
Rhythm at follow-up 1 year (n=197):	
Sinus	153(78%)
Atrial fibrillation/Flutter	44(22%)
Sinus Without AAD	82(54%)
Sinus Without Coumadin	145(95%)

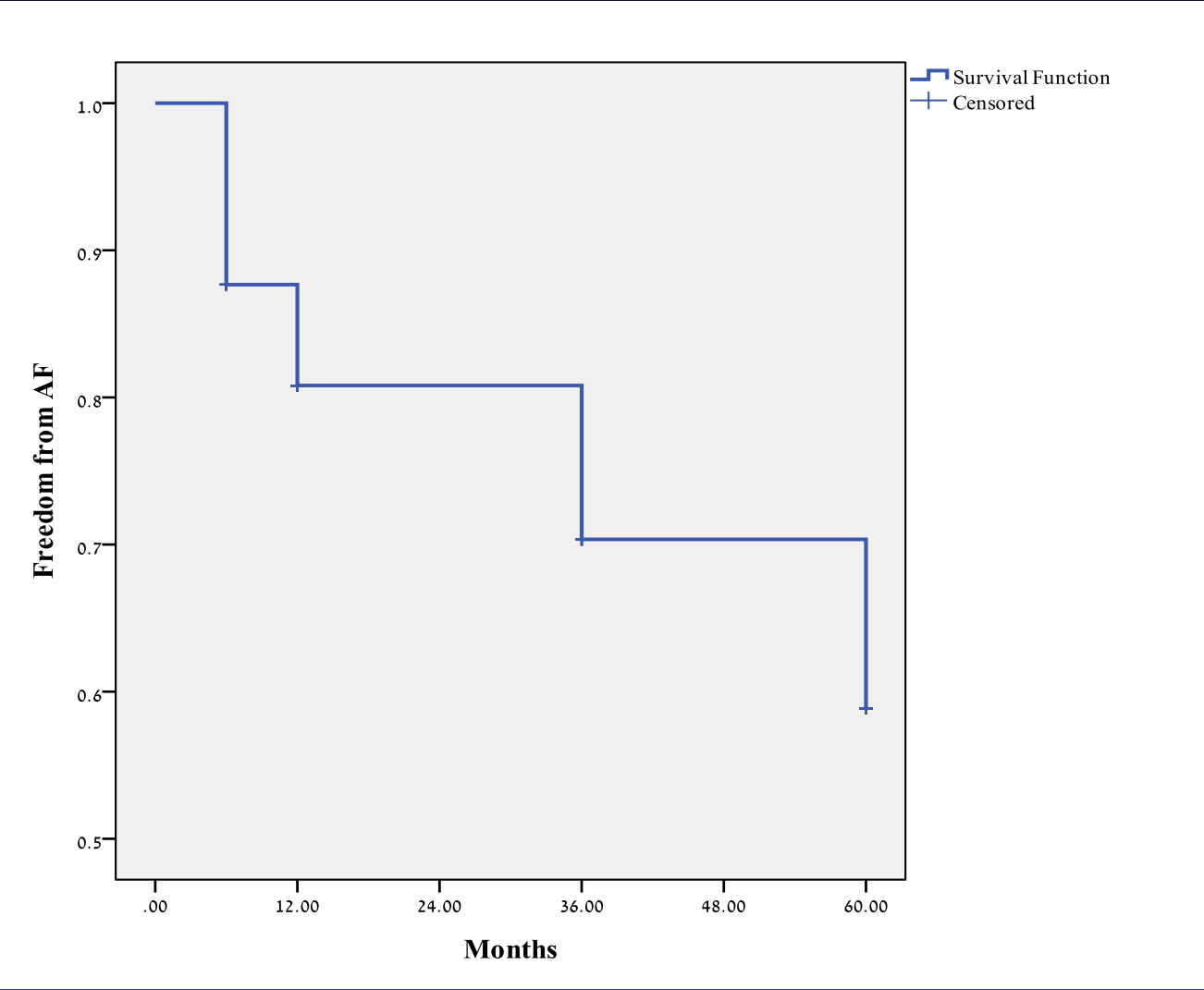


# Late Results

## Length of follow-up (mo)- $30 \pm 20$

Rhythm at follow-up 3 year (n=88):	
Sinus	65(74%)
Atrial fibrillation/Flutter	23(26%)
Sinus Without AAD	54(83%)
Sinus Without Coumadin	65(100%)
Rhythm at follow-up 5 year (n=65):	
Sinus	42(65%)
Atrial fibrillation/Flutter	23(35%)
Sinus Without AAD	37(88%)
Sinus Without Coumadin	17(40%)

# Freedom from Atrial Fibrillation/Flutter post Maze



# Risk Factors for Recurrent AF Post-ablation

- **AF Type (Permanent)** **p=0.004**
- AF Duration p=0.1
- LA Vol. > 200 cm<sup>3</sup> NS
- Sex NS
- Age NS
- NYHA Class NS

# Conclusion

The efficacy of AF ablation seems to decline in the late follow up.

Patients with permanent AF can be expected to have a high rate of AF recurrence in the late follow up.