

# Temporal trends on percutaneous mitral commissurotomy: 30 years of experience.

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## ***Disclosure Statement of Financial Interest***

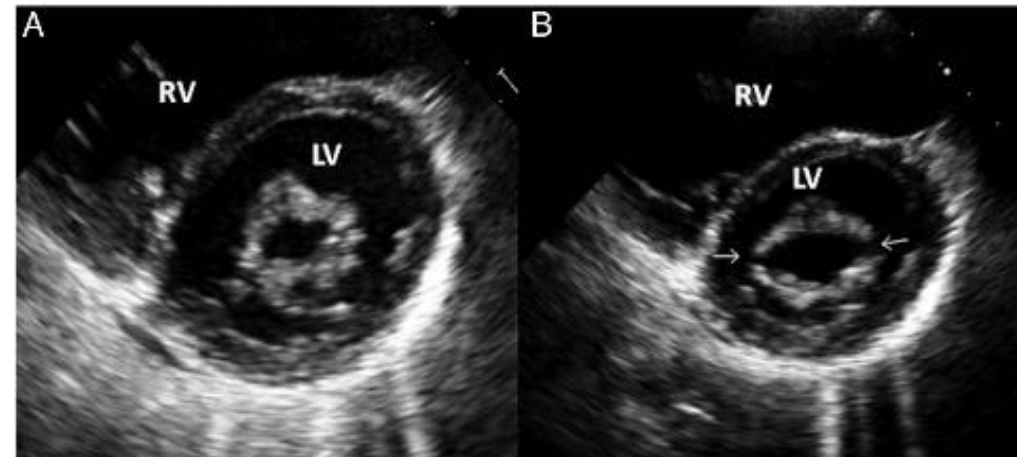
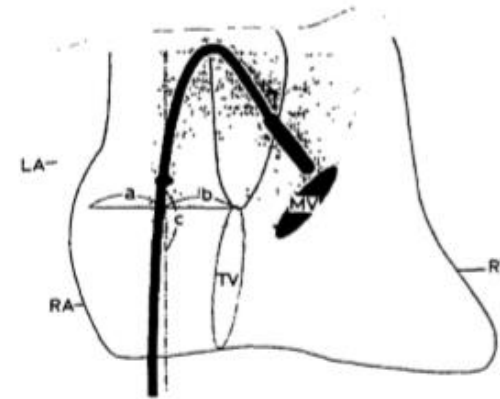
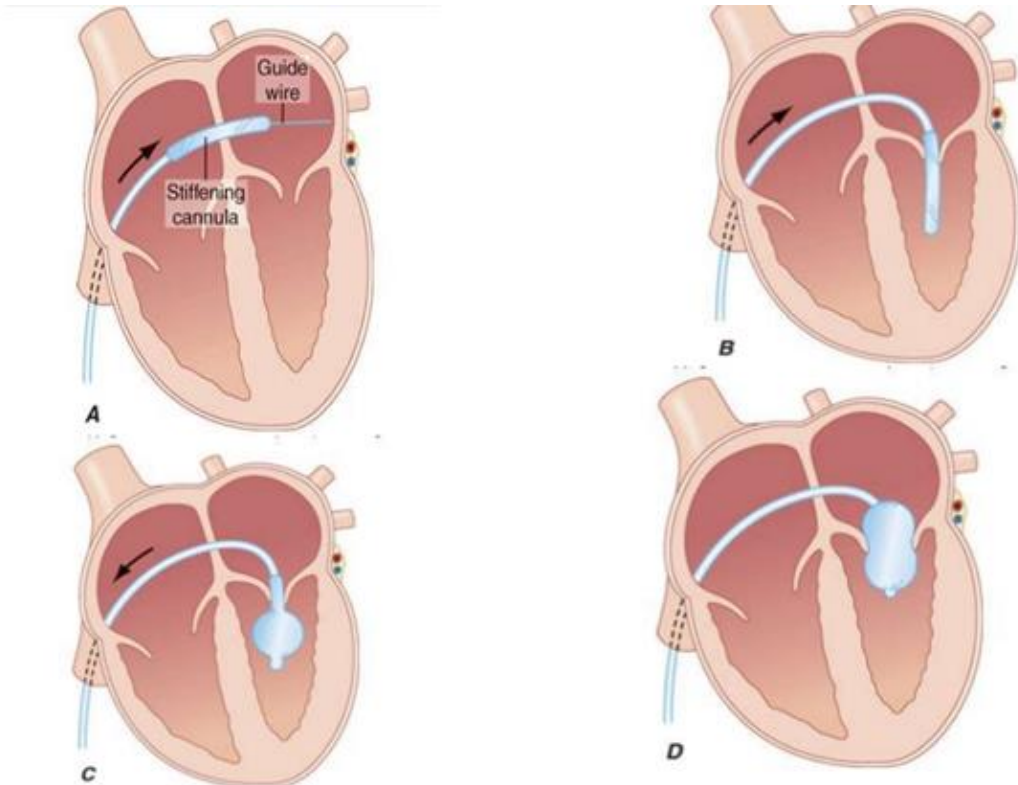
*I currently have, or have had over the last two years, an affiliation or financial interests or interests of any order with a company or I receive compensation or fees or research grants with a commercial company :*

**Speaker's name : Cyrielle Desnos, Paris**

**I do not have any potential conflict of interest**

# Introduction

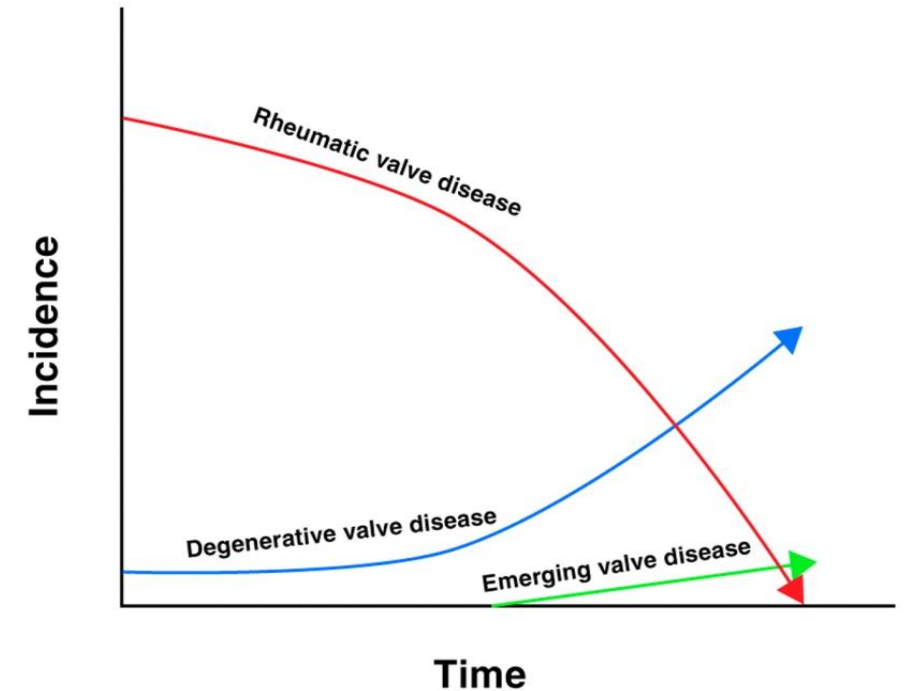
- Percutaneous mitral commissurotomy (PMC) = among 1<sup>st</sup> available percutaneous technique for the treatment of valvular diseases
- Described by Inoue in 1984



- Reference treatment for mitral stenosis (MS)
- Change in patients' profile overtime

## OBJECTIVES

- analyze the changes of patients' characteristics over 30 years
- determine the predictive factors of poor immediate results (PIR) of PMC



# Methods

- **Patients**

From 1986 to 2016, analyse of years 1987, 1996, 2006, 2016

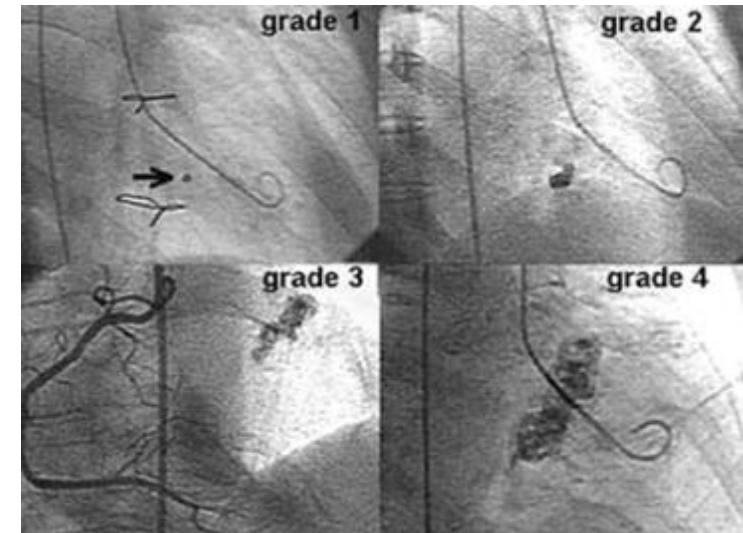
Monocentric : Bichat hospital, Paris, France,

All patients undergoing PMC

- **Valve anatomy assessment**

Calcification grade

**Cormier score**



**Group 1** : Pliable valves, mild impairment of subvalvular apparatus (chordae  $\geq 10$  mm)

**Group 2** : Pliable valves, severe disease of subvalvular apparatus (chordae  $< 10$  mm)

**Group 3** : Valve calcification confirmed by fluoroscopy

***Methods :***  
***Good immediate results of PMC***

**Composite endpoint:**

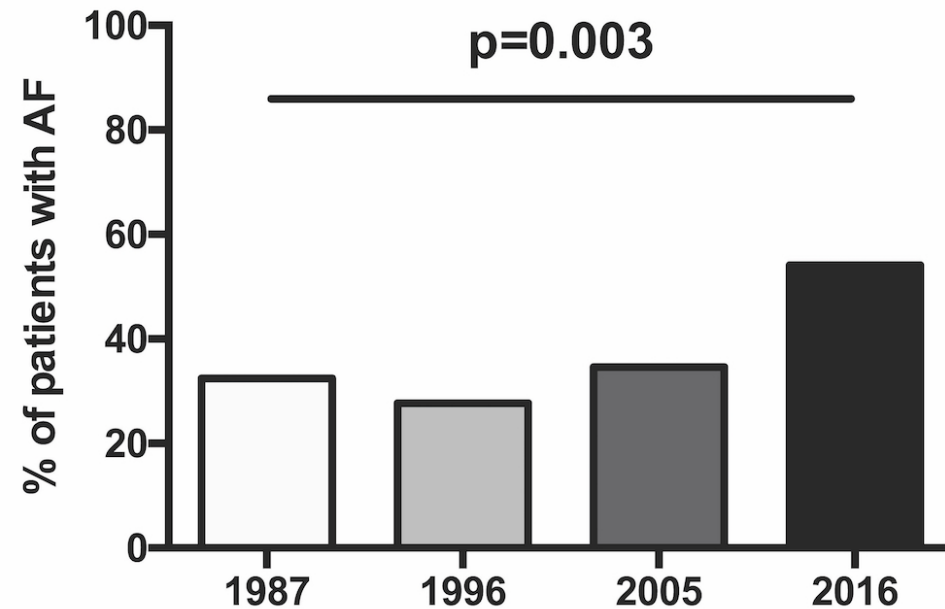
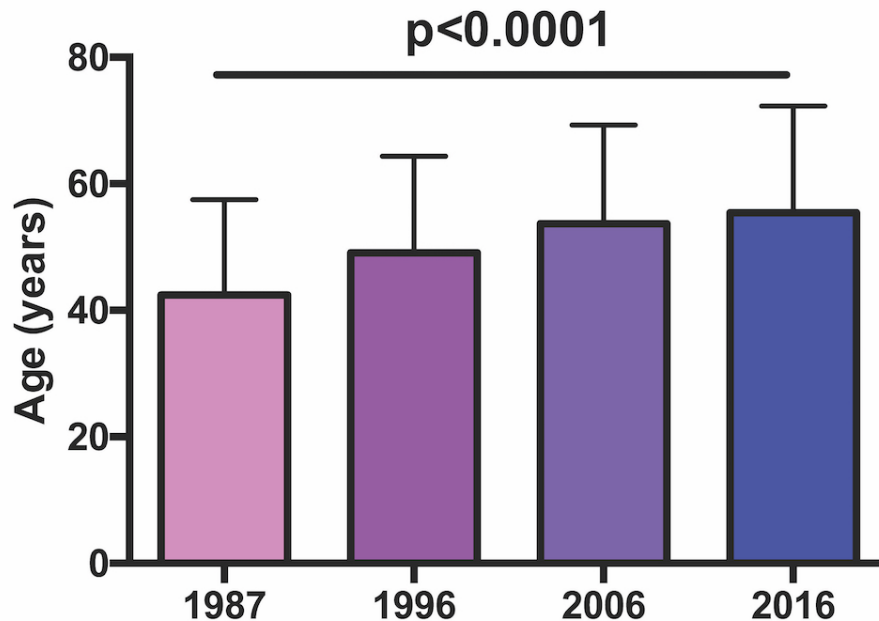
Final mitral valve area (MVA)  $\geq 1.5 \text{ cm}^2$

**AND**

Mitral regurgitation (MR)  $\leq$  grade 2

## Results: clinical characteristics

Variables	1987 n= 111	1996 n= 202	2006 n= 205	2016 n= 85	P
Male gender, n (%)	27 (24)	39 (19)	39 (19)	23 (27)	0.33
NYHA class 3-4	92 (83)	128 (63)	120 (59)	44 (54)	<0.0001
History of PMC	0	11 (5)	32 (16)	10 (12)	<0.0001



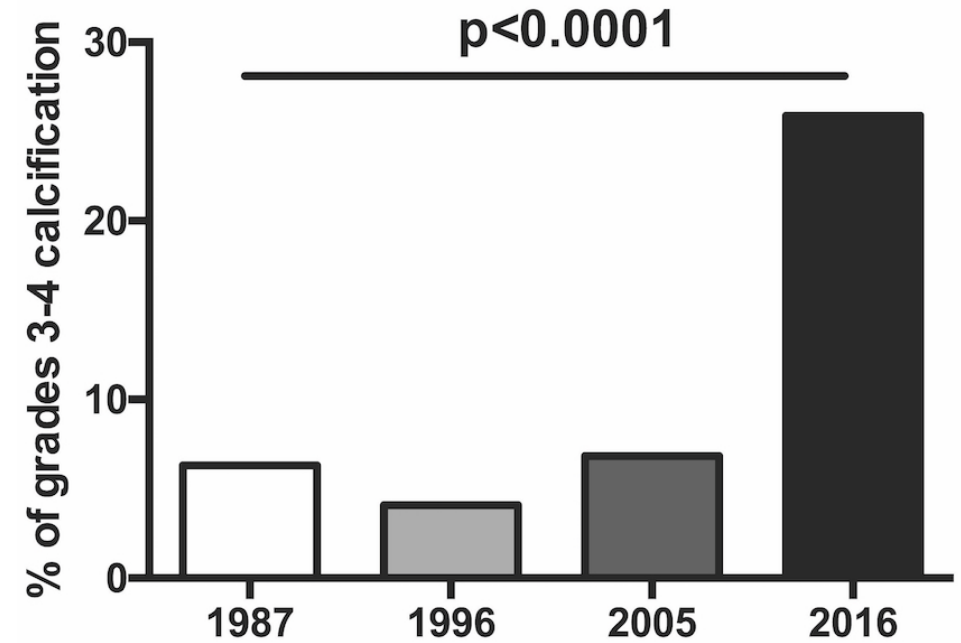
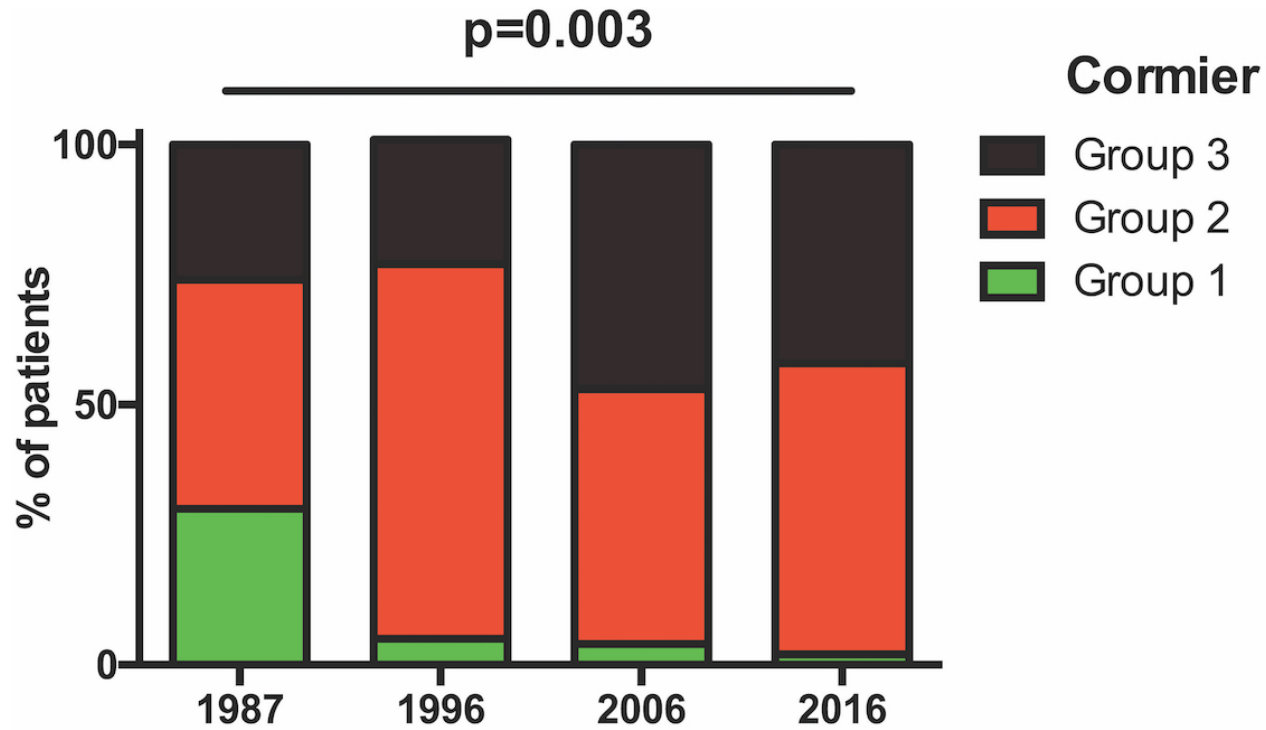


## *Results: echographic characteristics*

<b>Variables</b>	<b>1987 n= 111</b>	<b>1996 n= 202</b>	<b>2006 n= 205</b>	<b>2016 n= 85</b>	<b>P</b>
MVA (cm <sup>2</sup> )	1,04 ± 0,23	1,03 ± 0,22	1,03 ± 0,24	1,07 ± 0,26	0,42
Mitral gradient (mmHg)	10,8 ± 5,4	10,2 ± 4,1	9,5 ± 4,5	10,1 ± 4,7	0,13
MR grade 2	6 (5)	18 (9)	21 (10)	10 (12)	0,05
Systolic PAP (mmHg)	31,9 ± 12	46,1 ± 13	43,9 ± 13	46,8 ± 16	<0.0001



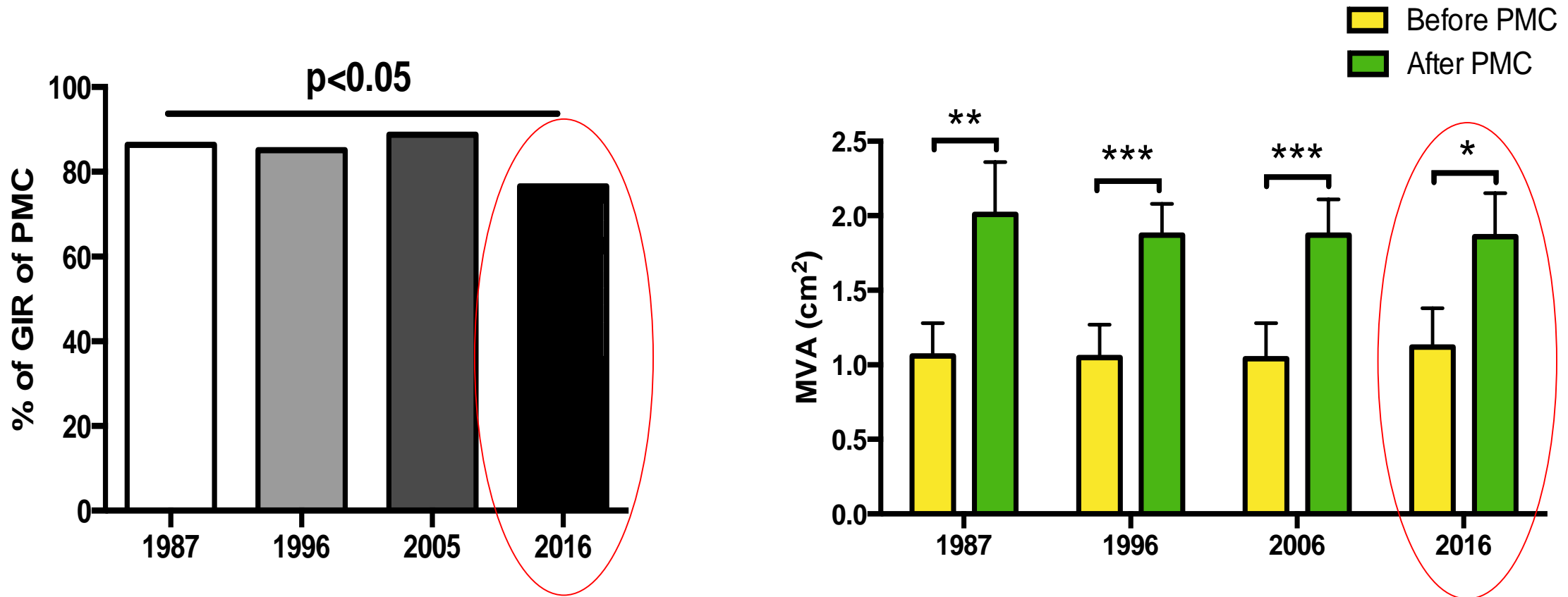
# Results : valve anatomy



Less favourable over years: presence and extent of calcification

# Results of PMC

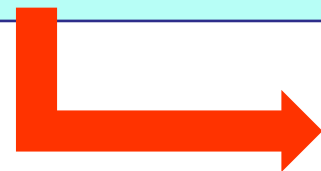
1.7% complication rate overall (hemopericardium, death, stroke, MR >2)



# *Predictors of poor immediate results*

3 factors identified in **multivariate analysis**:

Variables	GIR n= 519	Poor results n= 84	p
Pre-PMC MVA (cm <sup>2</sup> )	1.06 ± 0.23	0.92 ± 0.21	<0.0001
MR grade 2	42 (8)	17 (20)	0,01
Cormier Score 3	159 (31)	49 (59)	0,001



presence of calcification.

# Conclusion

## Temporal trends of PMC patients over 30 years

> 10 year of age increase



42.4 → 55.4  
(Years)

3-fold higher severe calcification



6.5% → 26%  
(Percent of patients)

But still good results



86% → 76%  
(Percent of good results )

## *Perspectives*

- Despite challenges raised by severe calcification, GIR were achieved in  $>3/4$  patients, thus allowing to **postpone surgery**.
- PMC remains a valid option in selected patients with less favourable characteristics.

***THANK YOU***

