

CHIRURGIE MITRALE RÉPARATRICE

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MVR

Introduction

Mitral Valve Repair is in constant evolution :

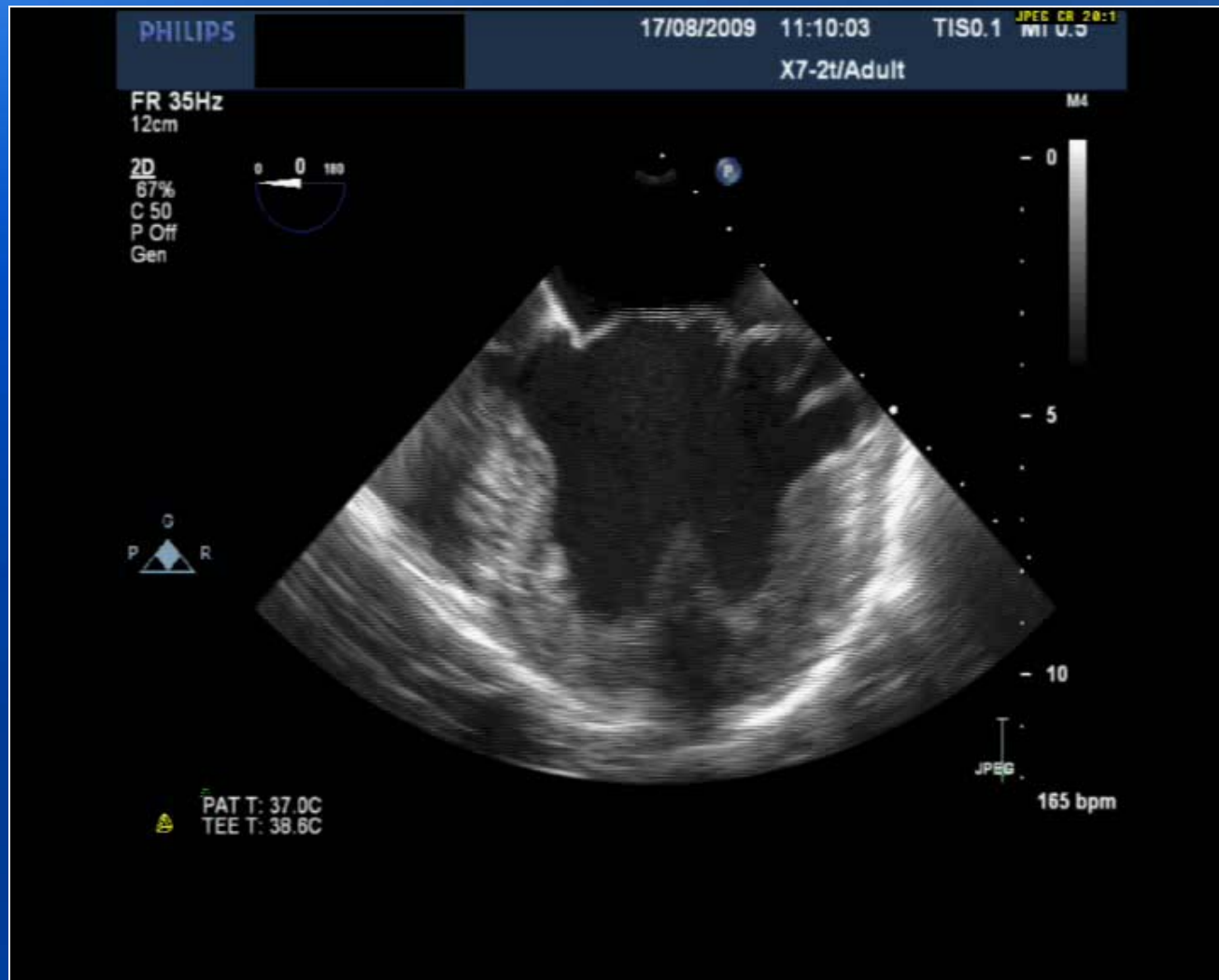
- new assessment criteria : **quantitative**
- new **guidelines**
- better **surgery** , especially for AL
- better approach to both ends of the spectrum:
 - . **Asymptomatic** patients
 - . **Heart failure** patients

Functional Approach *Pr Carpentier*

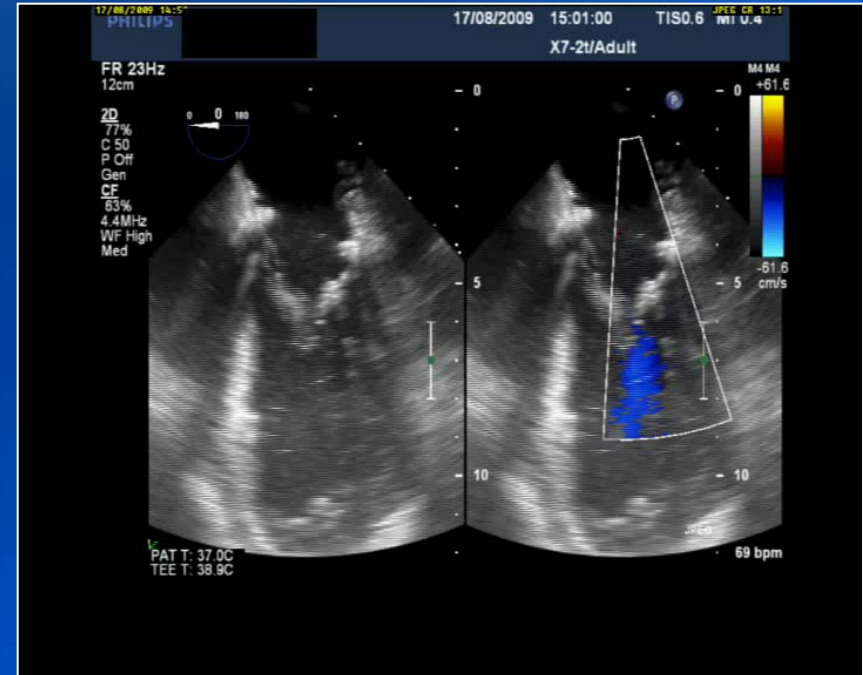
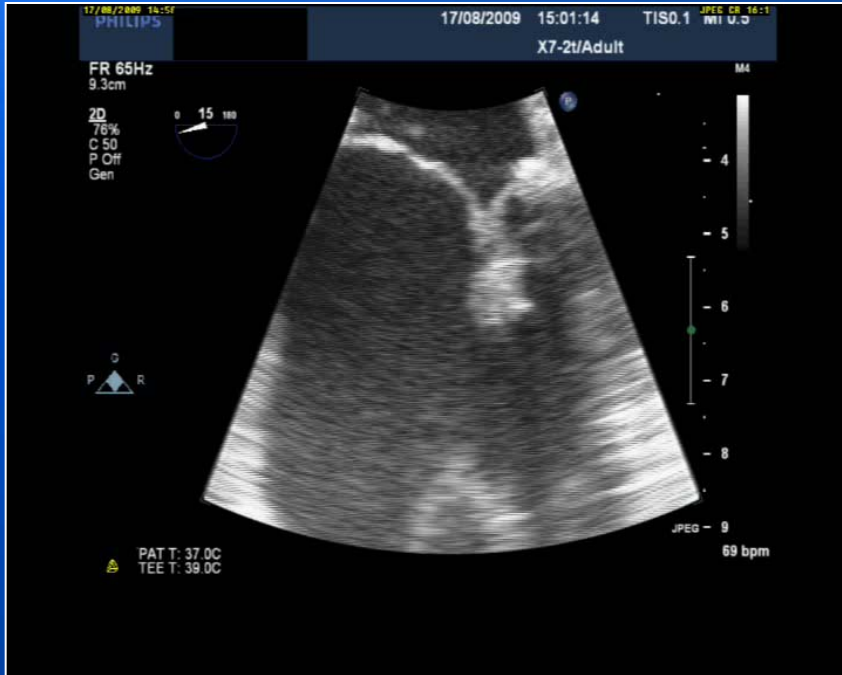
- “Restoring normal valve function rather than normal valve anatomy”
- Only 2 functional abnormalities -in relation to leaflet motion- leading to regurgitation
 - Leaflet prolapse: increased leaflet motion
 - Restricted leaflet motion



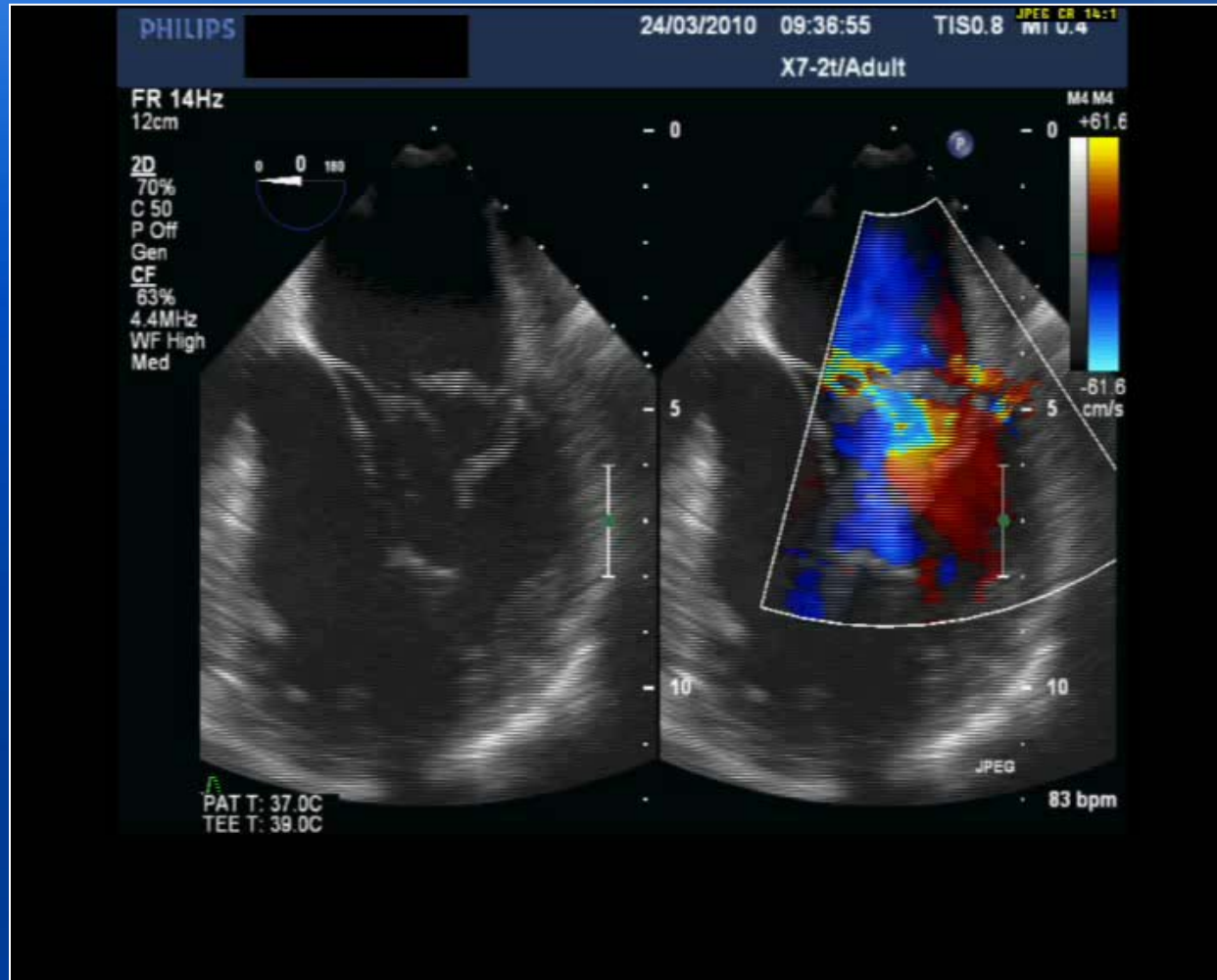
Maladie Barlow - *preop*



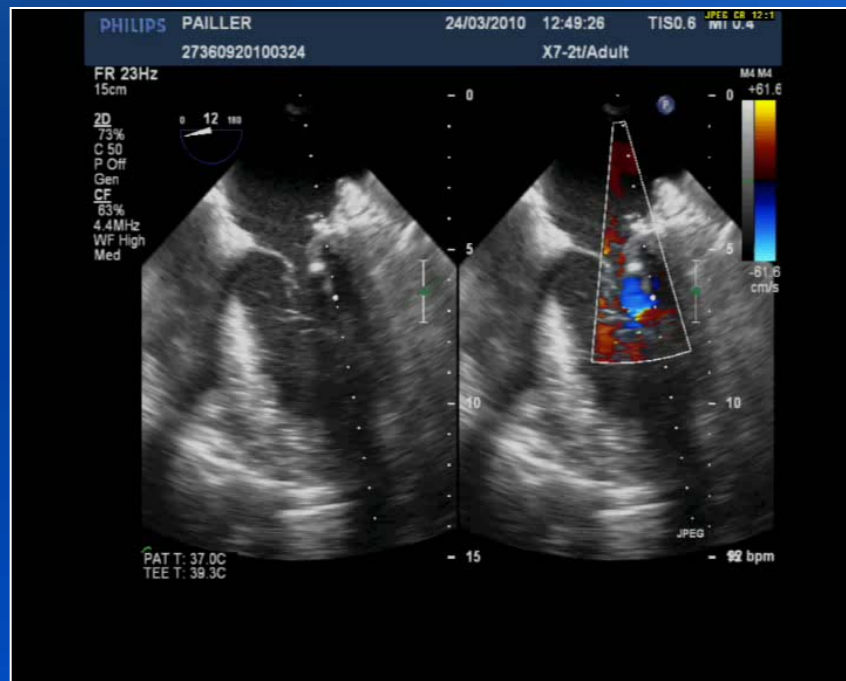
Coaptation - *postop*



preop



Mobilité de la petite valve - *postop*



Assessment of the severity of mitral regurgitation

	Regurgitant volume	Effective regurgitant orifice
grade 1	< 30 mL	< 20 mm ²
grade 2	30 - 44 mL	20 - 29 mm ²
grade 3	45 - 59 mL	30 - 39 mm ²
grade 4	≥ 60 mL	≥ 40 mm ²

Risk stratification in degenerative mitral valve disease

Mortality Risk Factors

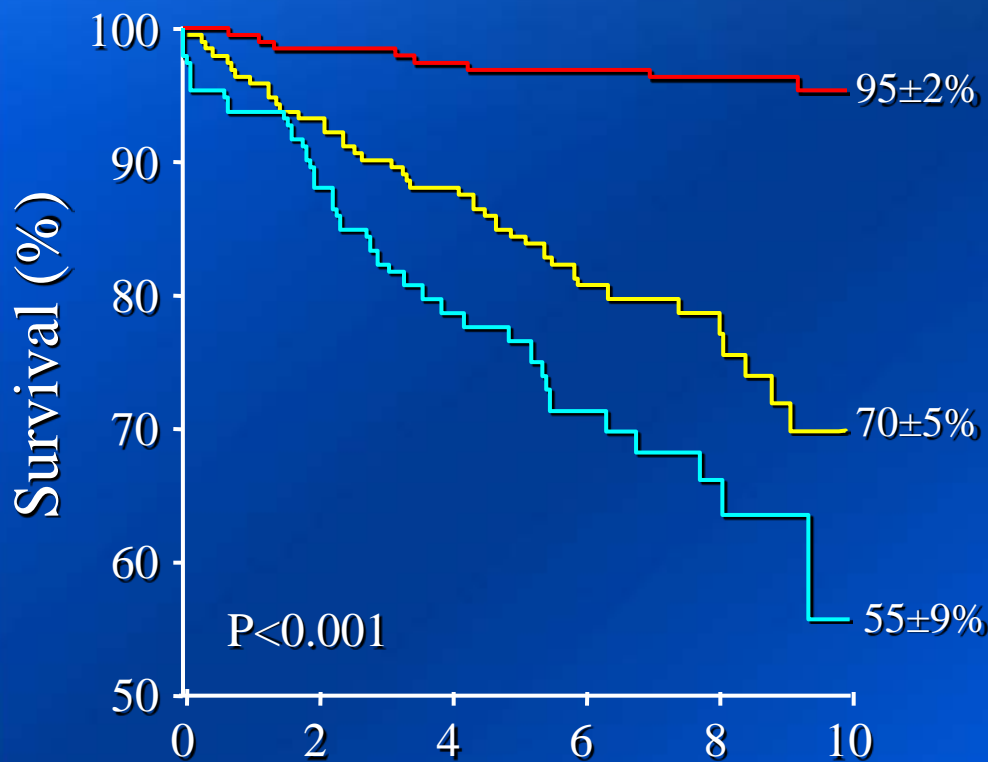
- EF < 50%
- MR ≥ moderate

Morbidity Risk Factors

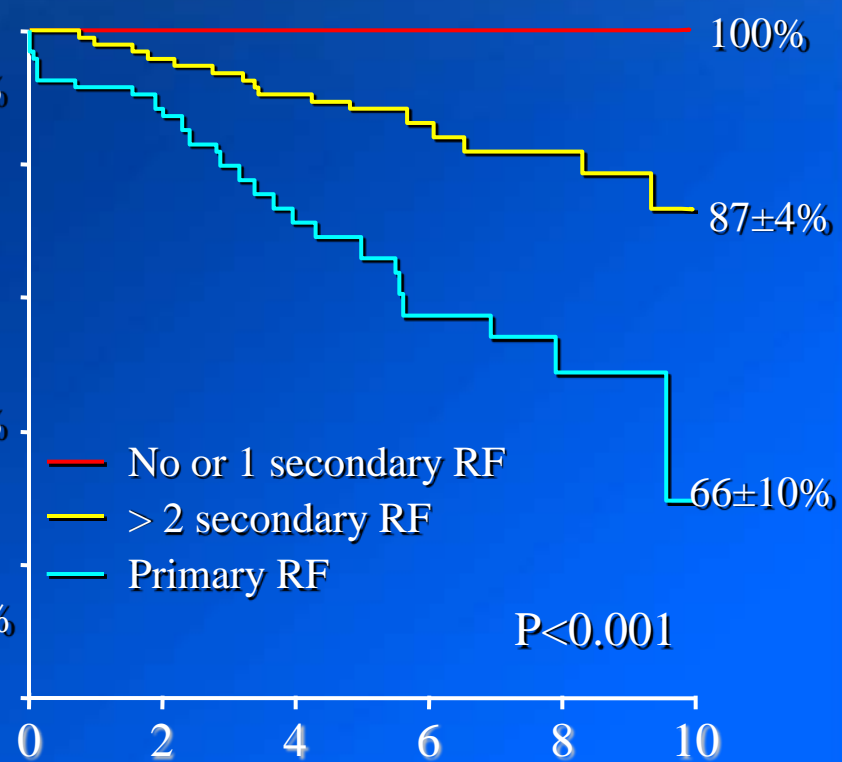
- Age ≥ 50 years
- Atrial Fib
- Slight MR
- Flail leaflet
- LA ≥ 40 mm

Outcome of asymptomatic degenerative mitral valve disease

Overall Survival

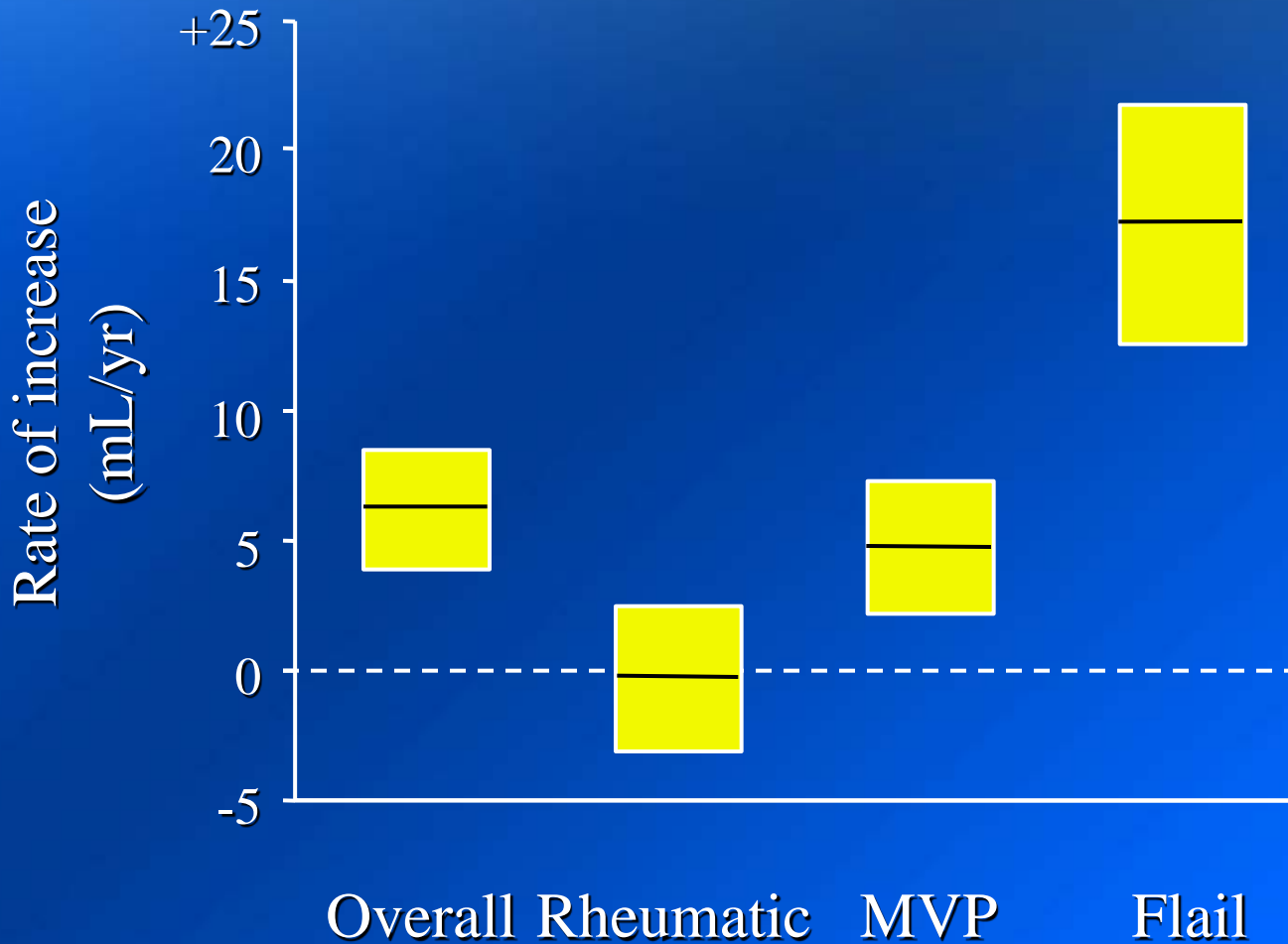


Cardiac Survival



Years after diagnosis

Progression of mitral regurgitation

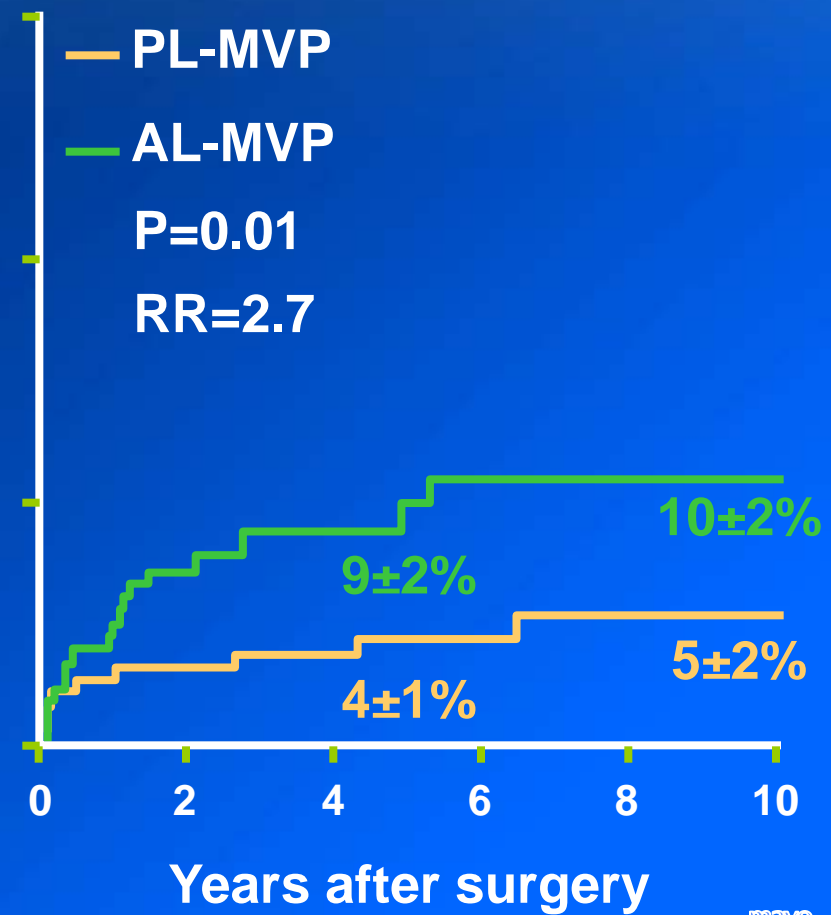
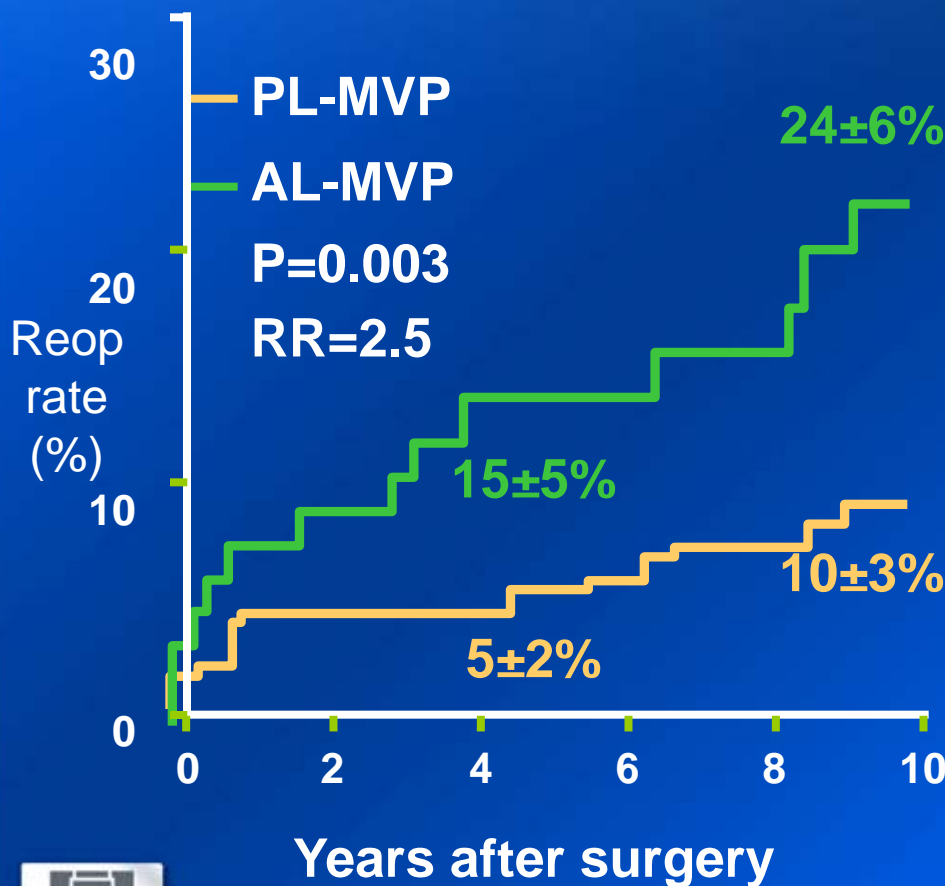


Reoperation after Valve Repair

Improving Results

1980's

1990's



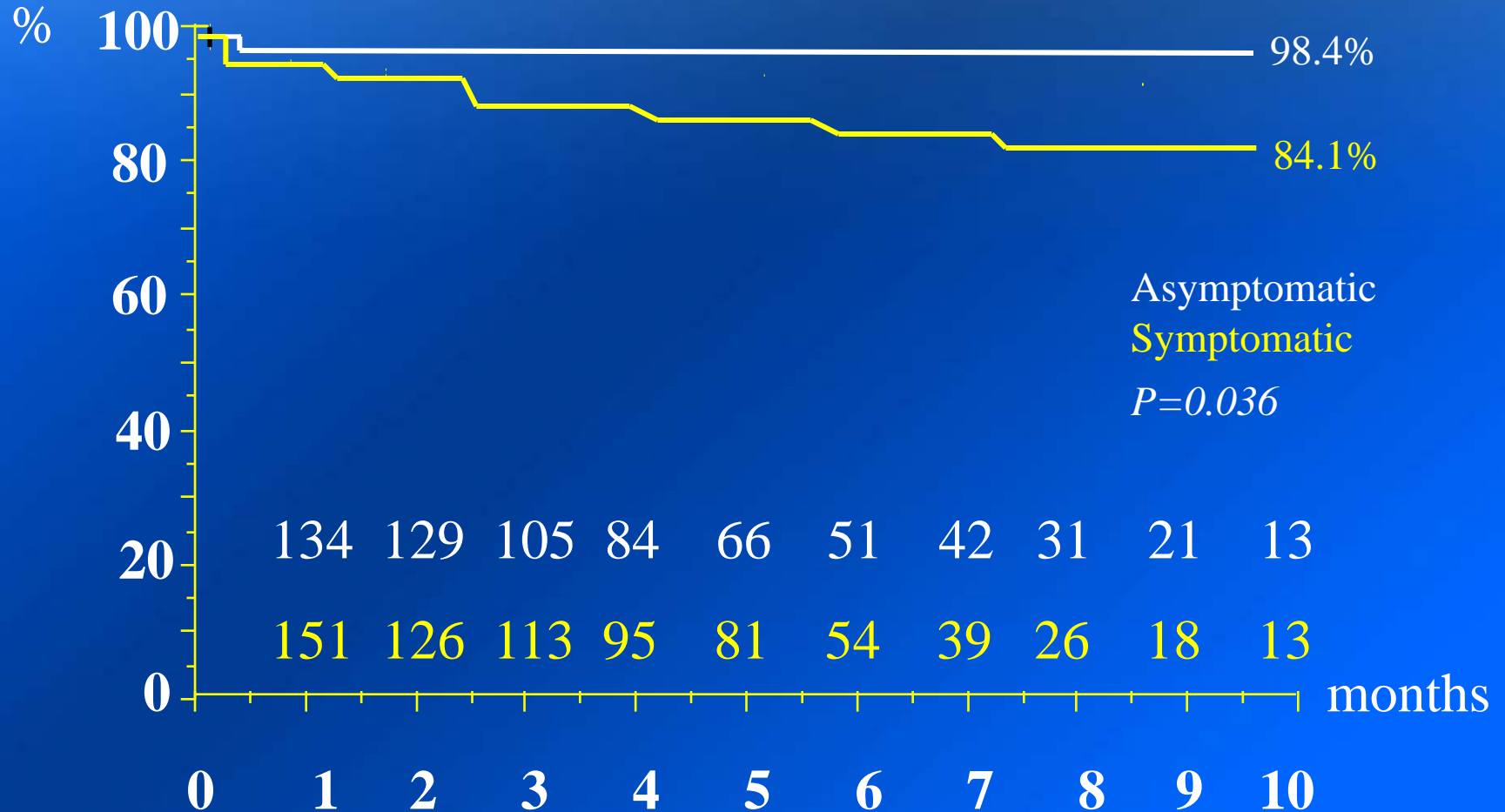
Asymptomatic MR: does it justify Suregry?

Pre operative echocardiogram findings

	Asymptomatic	Symptomatic	<i>p</i>
LVESD:	39,6 ± 6,1 mm	48.2+/-5.1	0.034
LVEDD:	56.9+/-5.6mm	63.9+/-6	0.021
M.R.	3,39 ± 0,5	3,4 ± 0,6	0.79
LA diameter:	49 ± 5,6 mm	56.2 ±8.7	0.013
E.F.	60,2 ± 8,7 %	54 ±12.3%	0.036

Asymptomatic MR: does it justify Surgery?

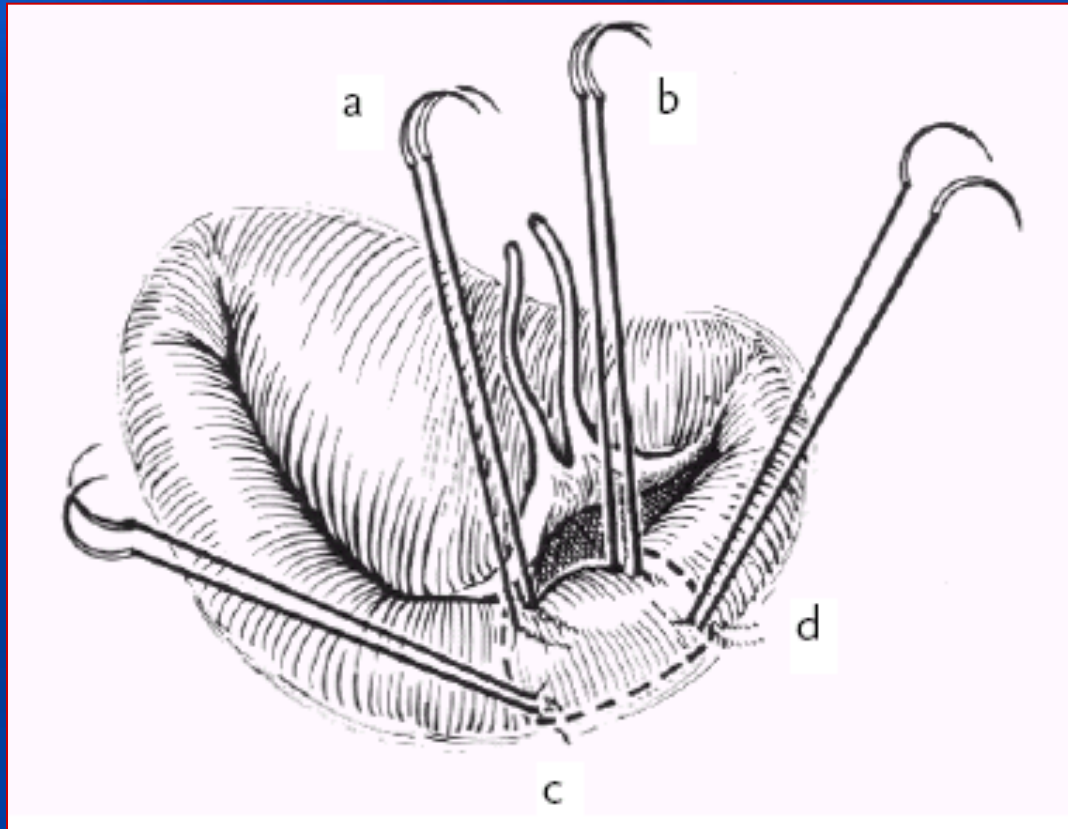
Freedom from cardiac events



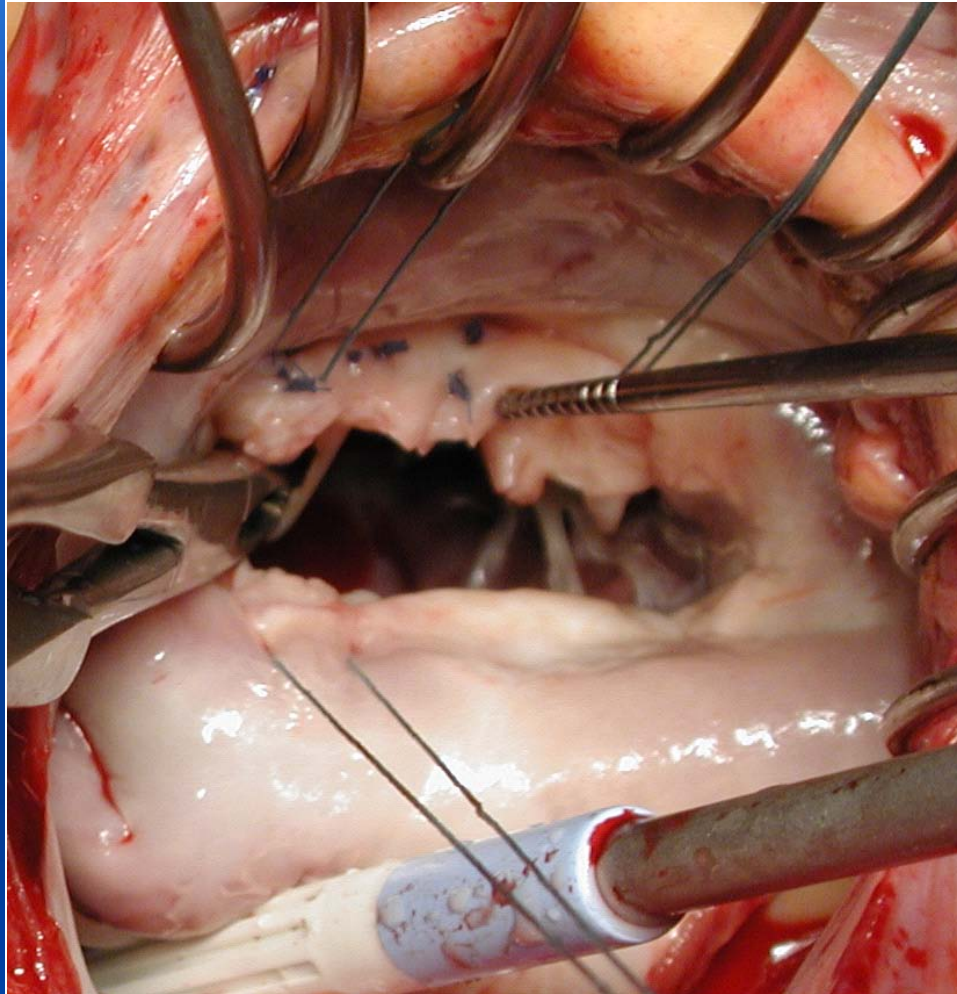
(Kaplan-Meier)

Mitral Valve Pathophysiology and Repair Techniques

Chordal transposition



TECHNIQUE



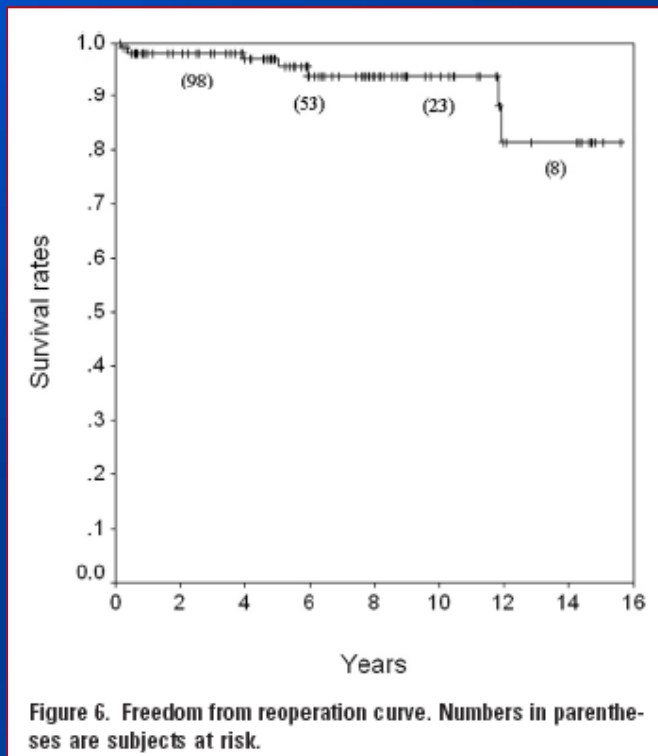
« The Chorda are inserted behind of Leaflet's Free-edge »

Current results of Mitral Valve Repair

Degenerative

Durability

Anterior/bi-leaflet prolapse: PM repositioning



Freedom from re-operation:

1 year: 97.4%

5 years: 97.4%

10 years: 92.8%

15 years: 86.7%

Current results of Mitral Valve Repair *Degenerative*

Durability

Anterior leaflet prolapse: PTFE neochordae

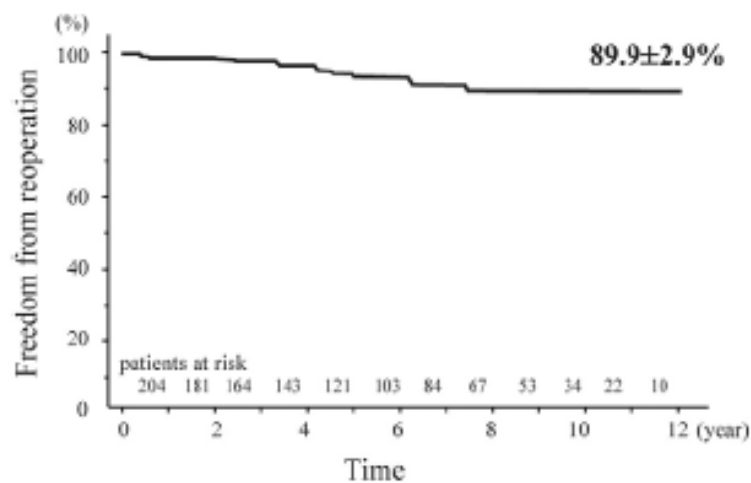


Fig 5. Actuarial freedom from reoperation.

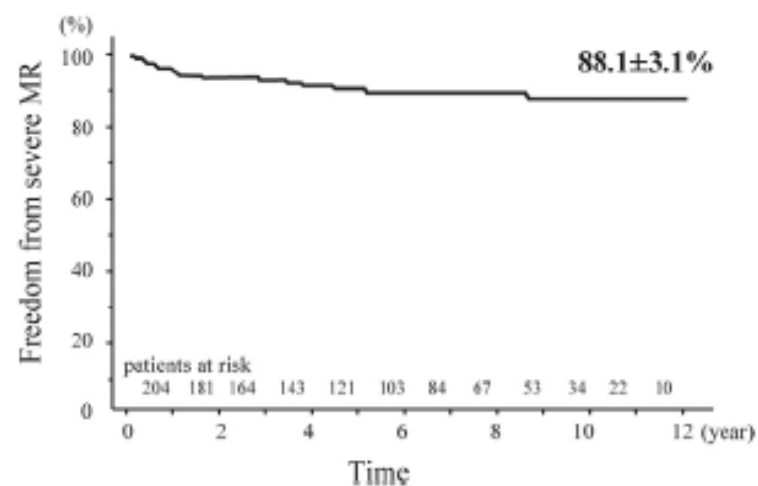


Fig 6. Actuarial freedom from severe mitral regurgitation (MR). Overall, freedom from severe mitral regurgitation (maximum regurgitant jet area $\geq 7.0 \text{ cm}^2$) estimate at 12 years was $88.1\% \pm 3.1\%$.

Current results of Mitral Valve Repair

Degenerative

Long term Survival

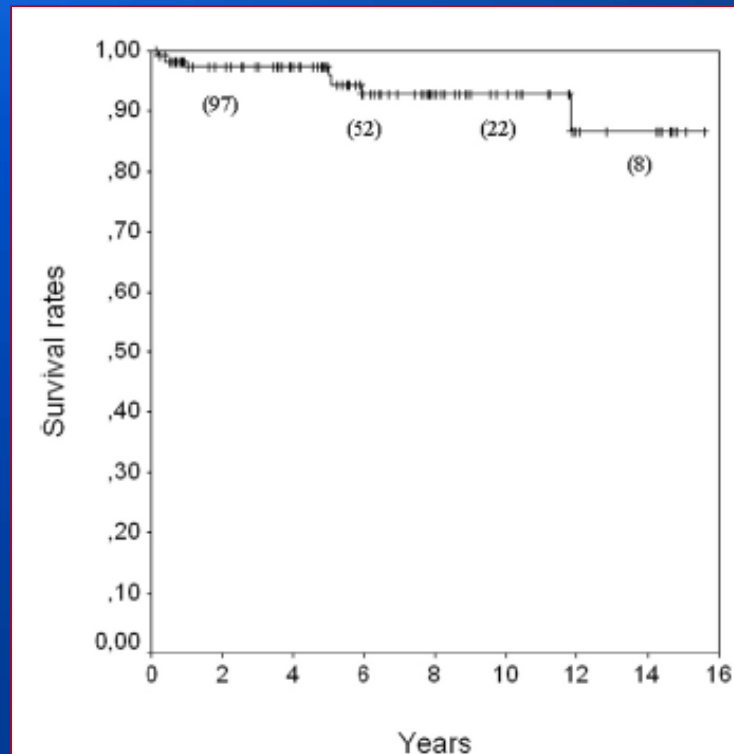


Figure 5. Actuarial survival curve including only cardiac deaths. Numbers in parentheses are subjects at risk.

Anterior and bileaflet prolapse

Actuarial survival:

1 year: 98.3%

5 years: 97.2%

10 years: 94.1%

15 years: 81.4%

MR

- **A.L.** is supposed to be complex BUT:
only few options
- **P.L.** is supposed to be easy BUT:
many options and results may be
sub optimal

MR

« Feasibility of repair »

**in all Guidelines is NOT an acceptable
concept**

**Surgeon's experience and expertise is
the key factor for M.V repair**

MR

What is the role of minimal approach? approach not surgery

- cosmetics: **BENEFIT**
- recovery: **LITTLE / NO BENEFIT**
- quality of repair: **NO BENEFIT**

Simplified repair techniques might jeopardize
long term results