TURIN, 20TH—21ST NOVEMBER 2008

GREAT INNOVATIONS IN CARDIOLOGY

4TH JOINT MEETING WITH MAYO CLINIC

4TH TURIN CARDIOVASCULAR NURSING CONVENTION

ABSTRACT SESSION (PART II)

Chairmen

D. Casalucci (Torino), M. Dalmasso (Ivrea—TO)

Cardiac Surgery Dept.
San Giovanni Battista Hospital
Turin

Direttore M. Rinaldi MD, PhD

JMMC
4TH JOINT MEETING WITH MAYO CLINIC

A COMPARISON BETWEEN TWO APPROACHES TO MITRAL VALVE SURGERY IN REOPERATIONS: HEART PORT ACCESS AND CONVENTIONAL STERNOTOMY

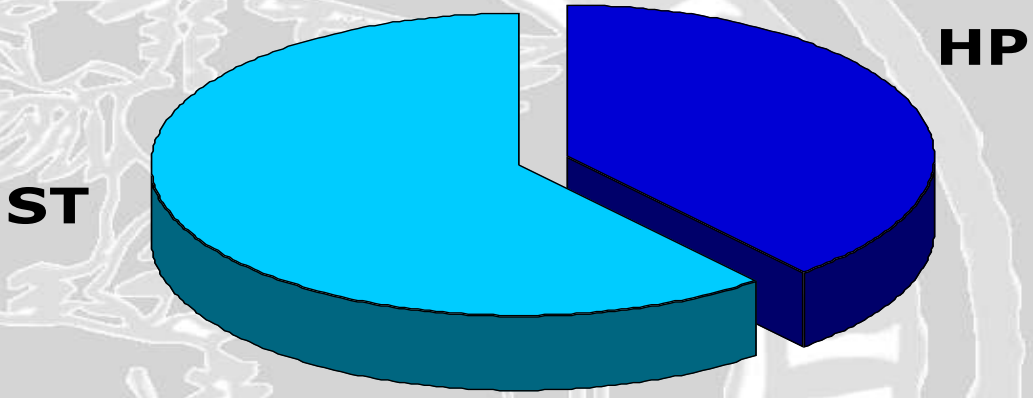
Dr. S. El Qarra

MITRAL VALVE SURGERY

Port Access vs Sternotomy

Gen 06 – Sep 08

Total : 308 pts



Diagnosis:

Mitral Regurgitation

Mitral Stenosis

Port Access (HP)	**120 pts (39%)**
OPEN (ST)	**188 pts (61%)**

MITRAL VALVE SURGERY

Port Access vs Sternotomy

	Port Access (120 pts)	**Sternotomy** (188 pts)	**t Test**
	Mean ± SD	Mean ± SD	
Age (years)	62.3 ± 12.5	65.4 ± 13.4	0.04
BMI	24.0 ± 3.9	24.4 ± 4.4	NS
EF (%)	56.5 ± 12.5	57.3 ± 11.9	NS
NYHA	2.5 ± 0.8	2.4 ± 0.9	NS
Log EURO (%)	8.3 ± 11.3	3.3 ± 8.5	<0.01
Add EURO	6.5 ± 3.6	6.3 ± 3.2	NS

MITRAL VALVE SURGERY

Port Access vs Sternotomy

Gen 06 – Sep 08

REDO HP: 46 pts (38,3%)

1° REDO: 35 (29.2 %)

2° REDOS: 5 (4.2 %)

>3°REDOS: 6 (5 %)

REDO ST: 33 pts (17,5%)

1° REDO: 30 (15.9 %)

2° REDOS: 2 (1.1%)

>3°REDOS: 1 (0.5 %)

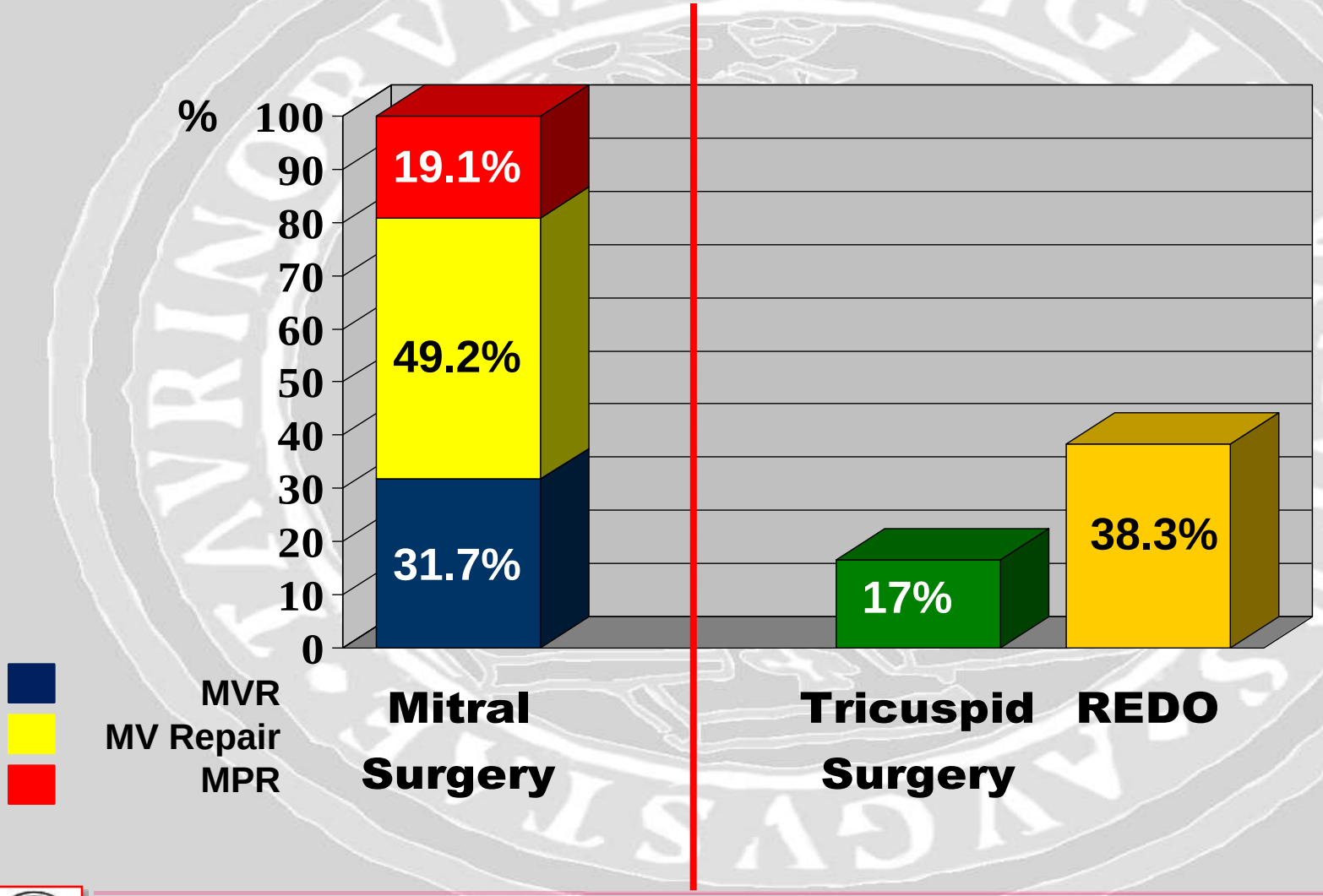
P<0,01

Surgical series

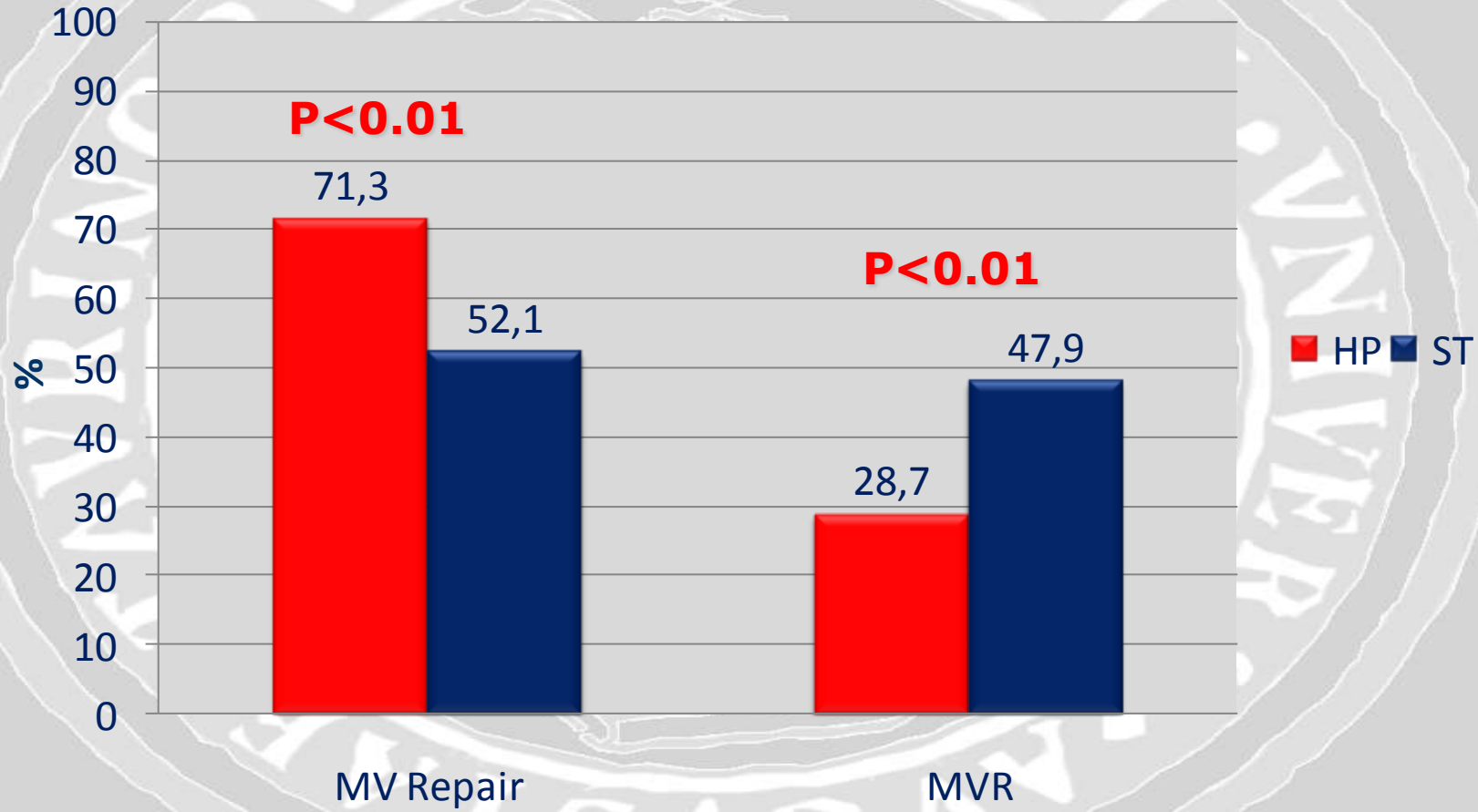
	HP (%)	**St** (%)	**Chi2**
MVR	31.7	51.6	<0.01
MV repair	49.2	40.9	NS
P2 resection	30	24.5	
Folding LPM	4.2	5.3	
Sliding plasty	0.8	3.2	
Chord	5.8	6.9	
Papillar muscles	-	1.2	
TV repair/TVR	16.6	38.8	<0.01
Prostheses malf.	19.1	7.5	<0.01
Ablation	3.3	4.2	-

MITRAL VALVE SURGERY

Port Access



Mitral valve repair feasilility



MITRAL VALVE SURGERY

Port Access vs Sternotomy

	Port Access (120 pts)	**Sternotomy** (188 pts)	**p**
	Mean ± SD	Mean ± SD	
Surgical time (min)	292.8 ± 80.5	274.3 ± 95.8	NS
ECC (min)	116.9 ± 35.81	119.0 ± 45.0	NS
Aortic Clamp (min)	76.72 ± 22.44	89.6 ± 36.9	<0.01
Ventilation (hs)	17.2 ± 26.46	15.2 ± 18.4	NS
Blood loss (cc)	473.1 ± 403.4	504.6 ± 641.6	NS
EC	2.1 ± 2.5	1.9 ± 2.3	NS
Hospital stay (d)	13.43 ± 7.61	12.6 ± 6.1	NS
30-day mortality	5%	4%	NS

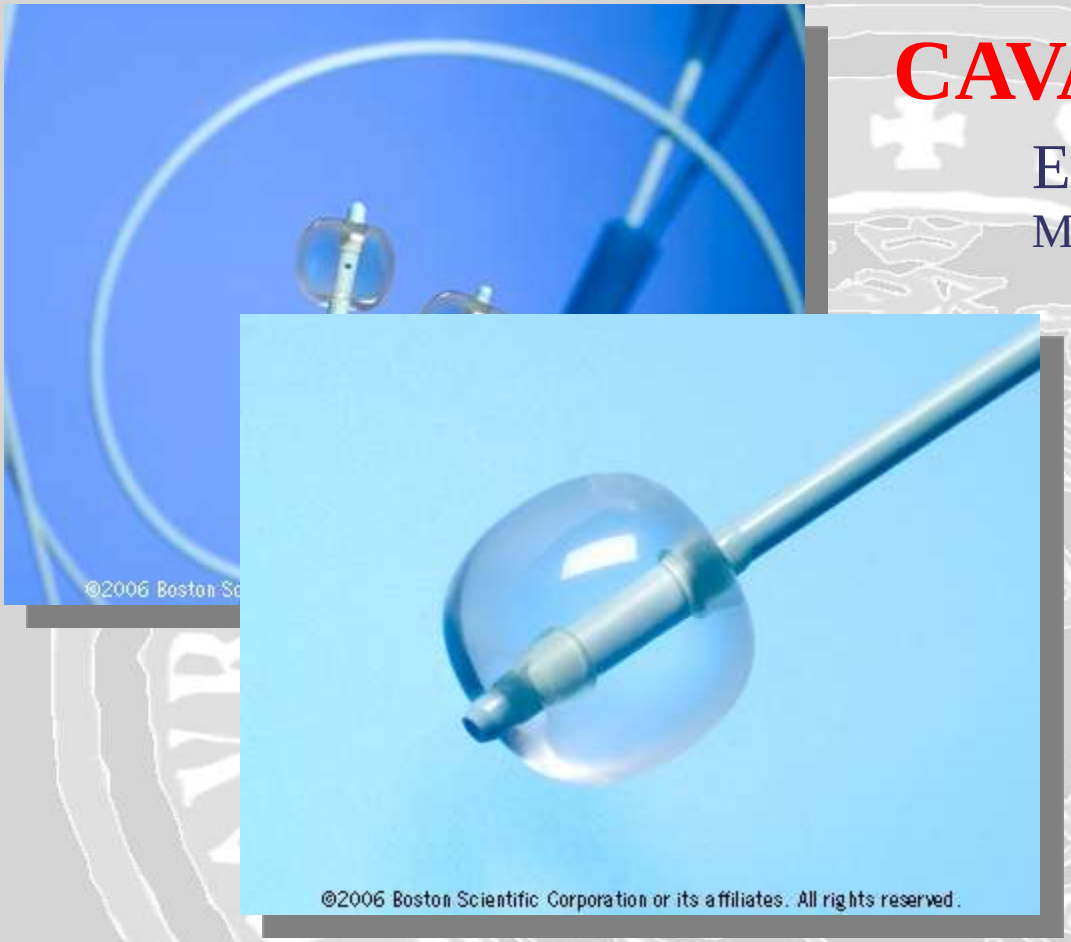
REDOS

	Port Access (46 pts)	**Sternotomy** (33 pts)	**t Test**
	Mean ± SD	Mean ± SD	
Surgical time (min)	322,3 ± 100,9	348,8 ± 114,6	NS
ECC (min)	133,2 ± 43,8	145,1 ± 65,2	NS
Aortic Clamp (min)	79,4 ± 23,5	106,1 ± 53,5	<0,01
Ventilation (hs)	16,2 ± 16,1	22,3 ± 19,2	NS
Blood loss (cc)	511,8 ± 497,6	780,6 ± 846,2	0.08
EC	2,9 ± 3,0	3,0 ± 3,0	NS
Hospital stay (d)	17,0 ± 10,3	17,9 ± 9,7	NS

CAVAL OCCLUSION

EQUALIZER BALLOON

Meditech Boston Scientific



Nylon catheter

Silicon balloon

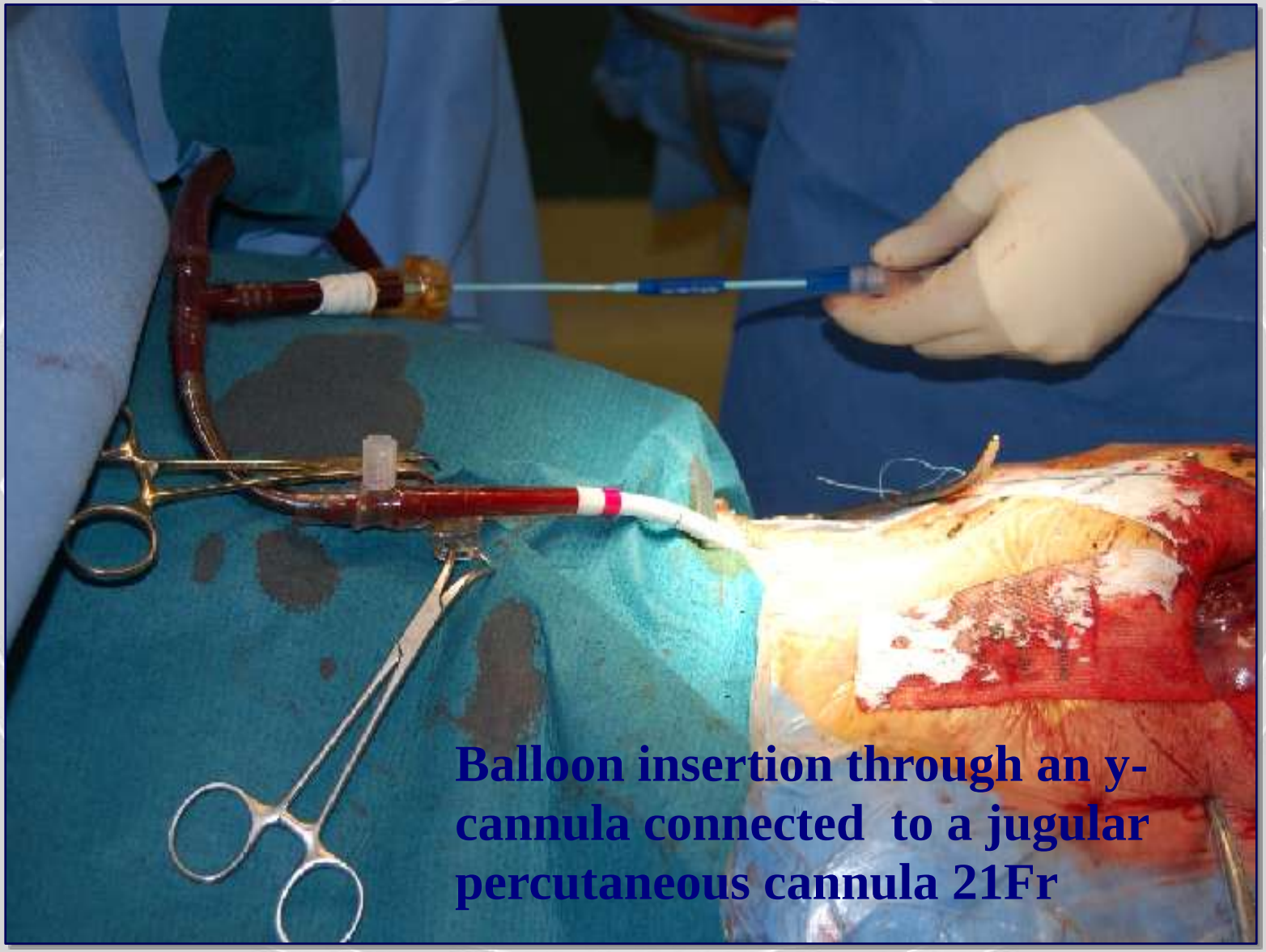
Diameter max 7Fr

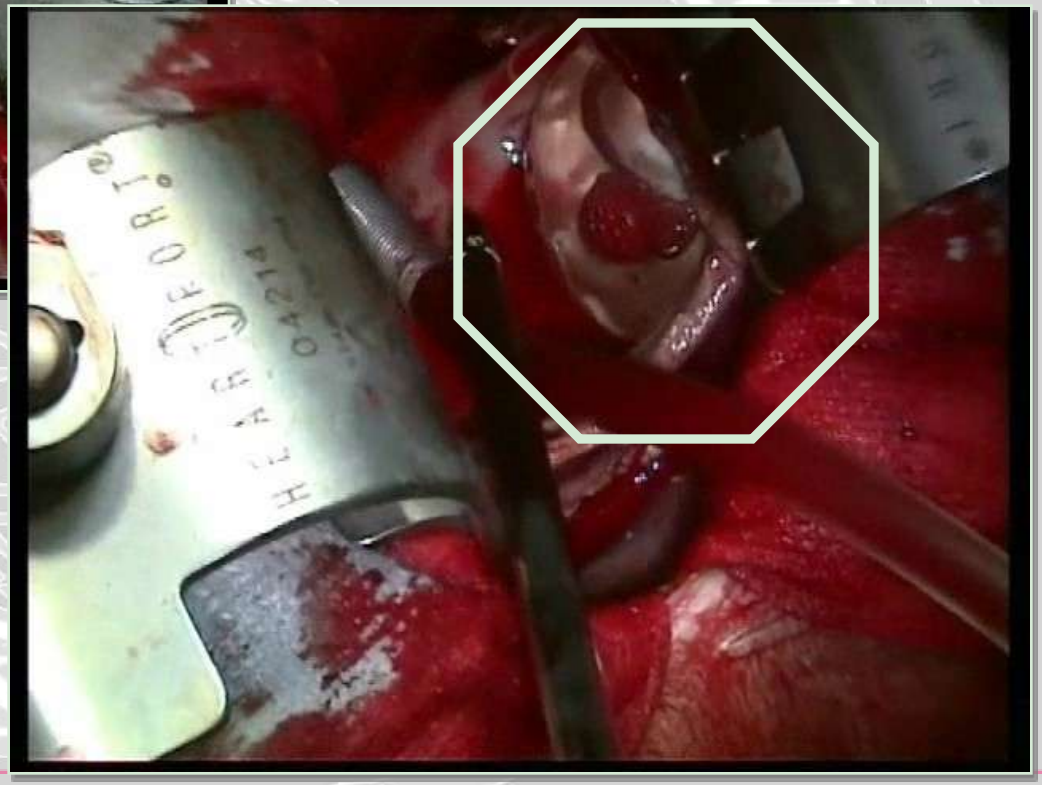
Lenght 65 cm

Inflated Balloon Maximum diameter

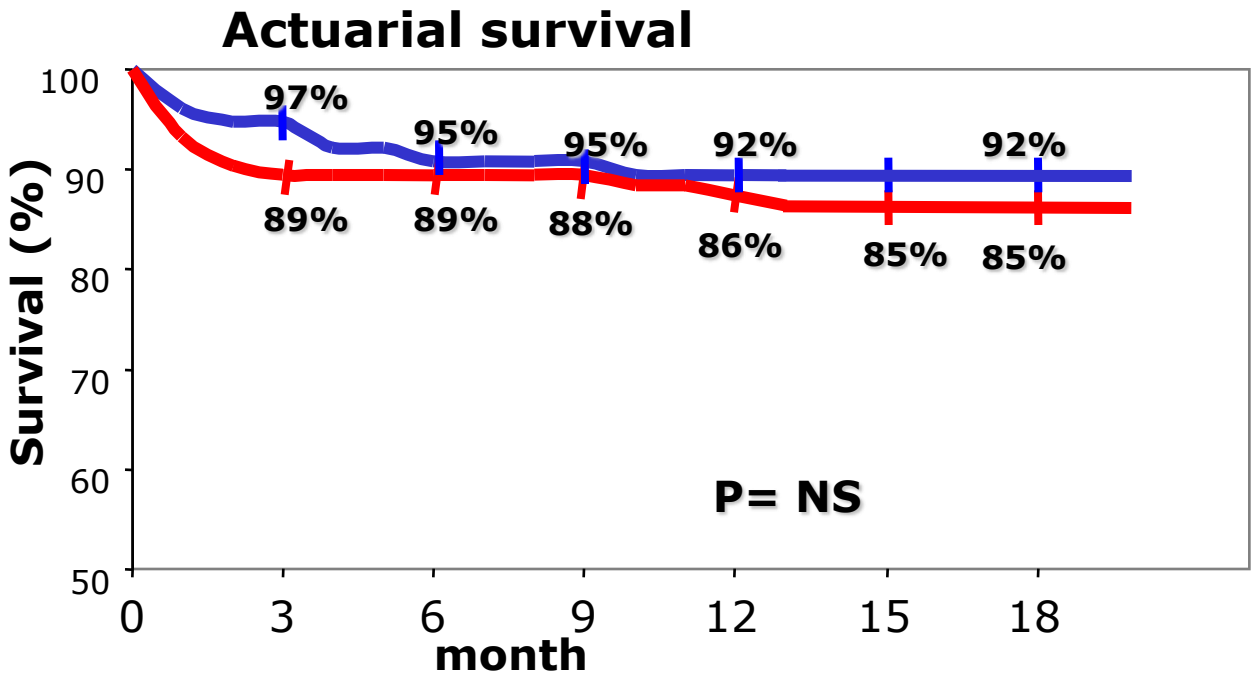
IVC: 40 mm

SVC: 33 mm


Balloon insertion through an y-cannula connected to a jugular percutaneous cannula 21Fr



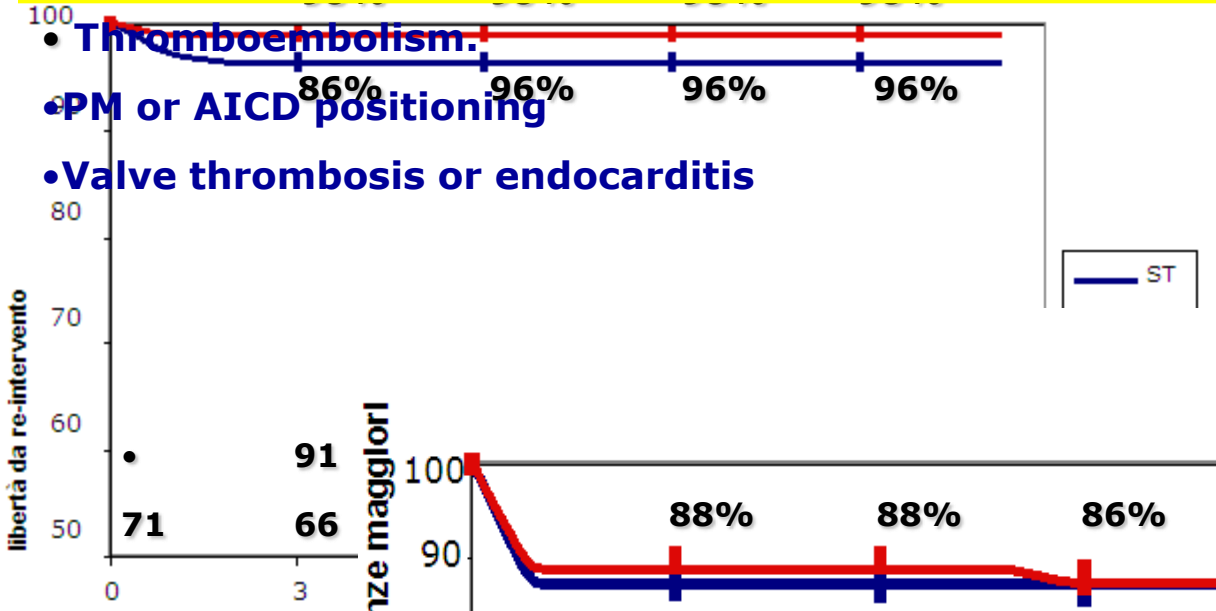
OPEN vs PORT ACCESS

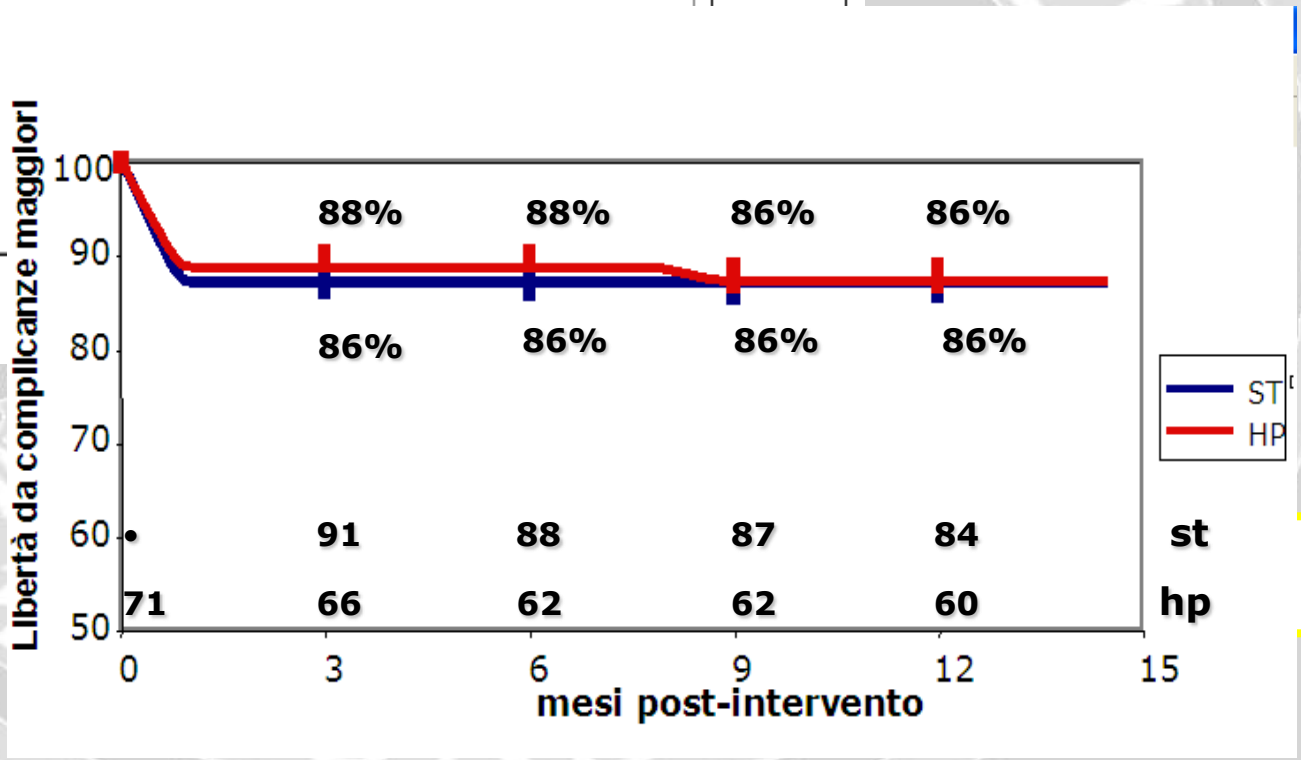


HP	71	67	63	62	61	61
ST	104	94	91	90	87	84

Freedom from major complication

- Thromboembolism.
- PM or AICD positioning
- Valve thrombosis or endocarditis





Conclusion

- **Port-Access mini-invasive approach provided an excellent mitral and tricuspid valve view, necessary for surgical repair.**
- **The procedure is repeatable and the results are comparable between two groups, minimizing the complication in high-risk patients.**

- **Considering Redos, there's no reason for extended adhesion dissection with consequent reduction in re-operation access complication (heart chamber damages) and bleeding.**

- **Caval endovascular occluder allow beating heart surgical approach on tricuspid valve with aortic clamp time reduction and lower risk of lesion.**

Grazie