



*Milano 23 Marzo 2016*

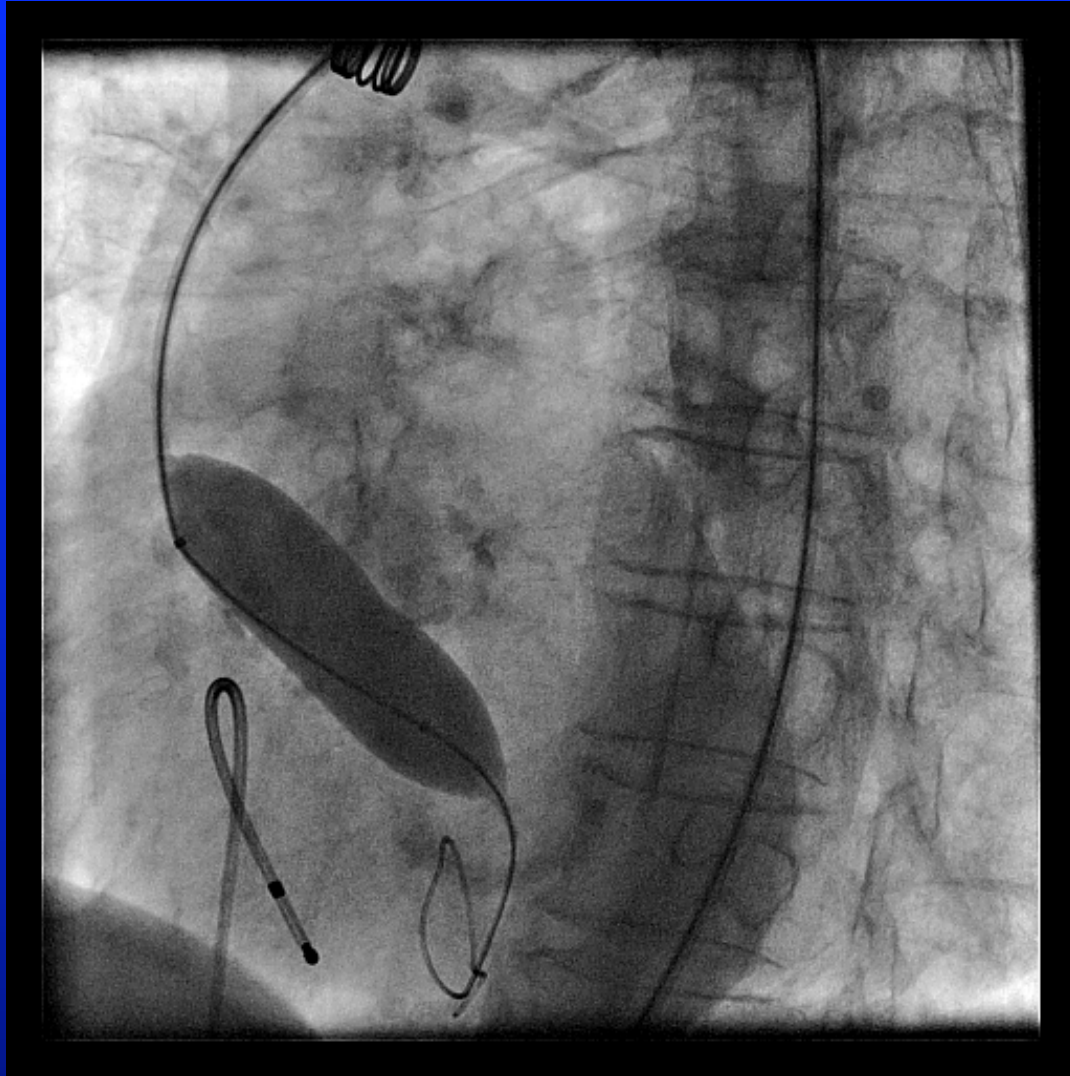
*La Valvuloplastica Percutanea: Indicazioni e Tecnica.  
Una risorsa a cui può essere giusto, in casi selezionati,  
ricorrere in alternativa alla TAVI.*

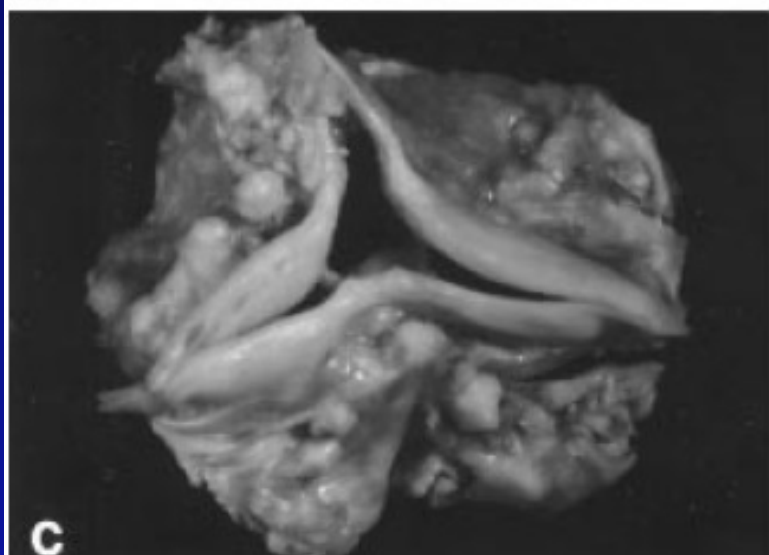
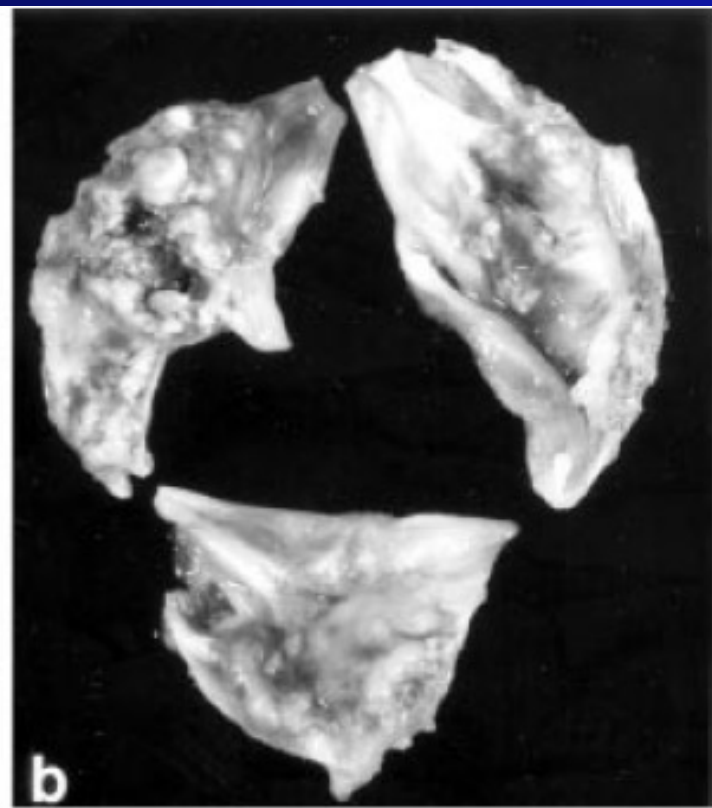
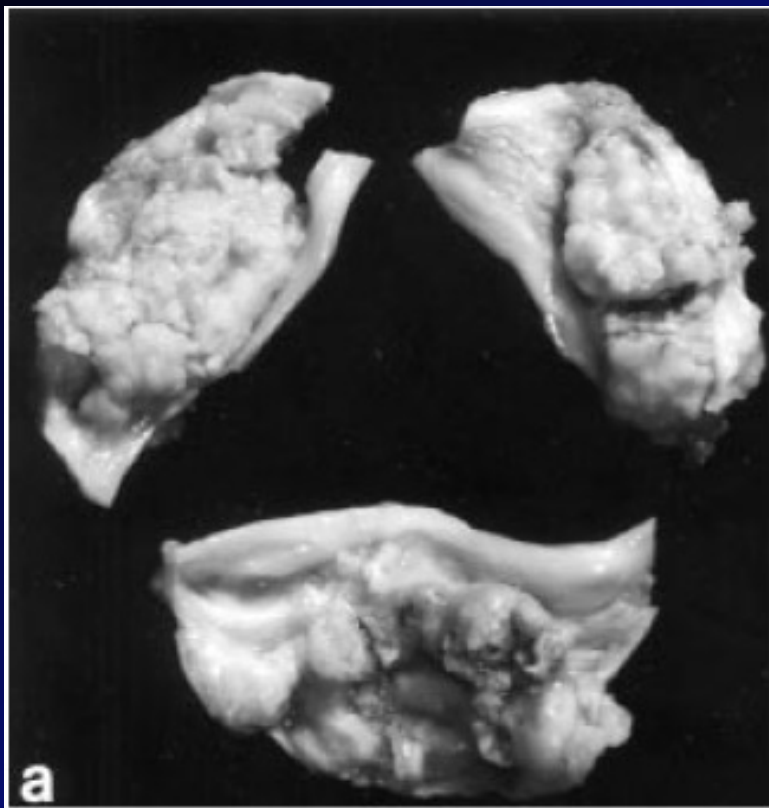
*Le possibili ragioni di una diffusione eterogenea nel nostro Paese*

*Andrea Santarelli  
Dipartimento Malattie Cardiovascolari AUSL Romagna  
Ospedale Infermi, Rimini*

Indicazioni.....

# Dilatazione Percutanea della Valvola Aortica





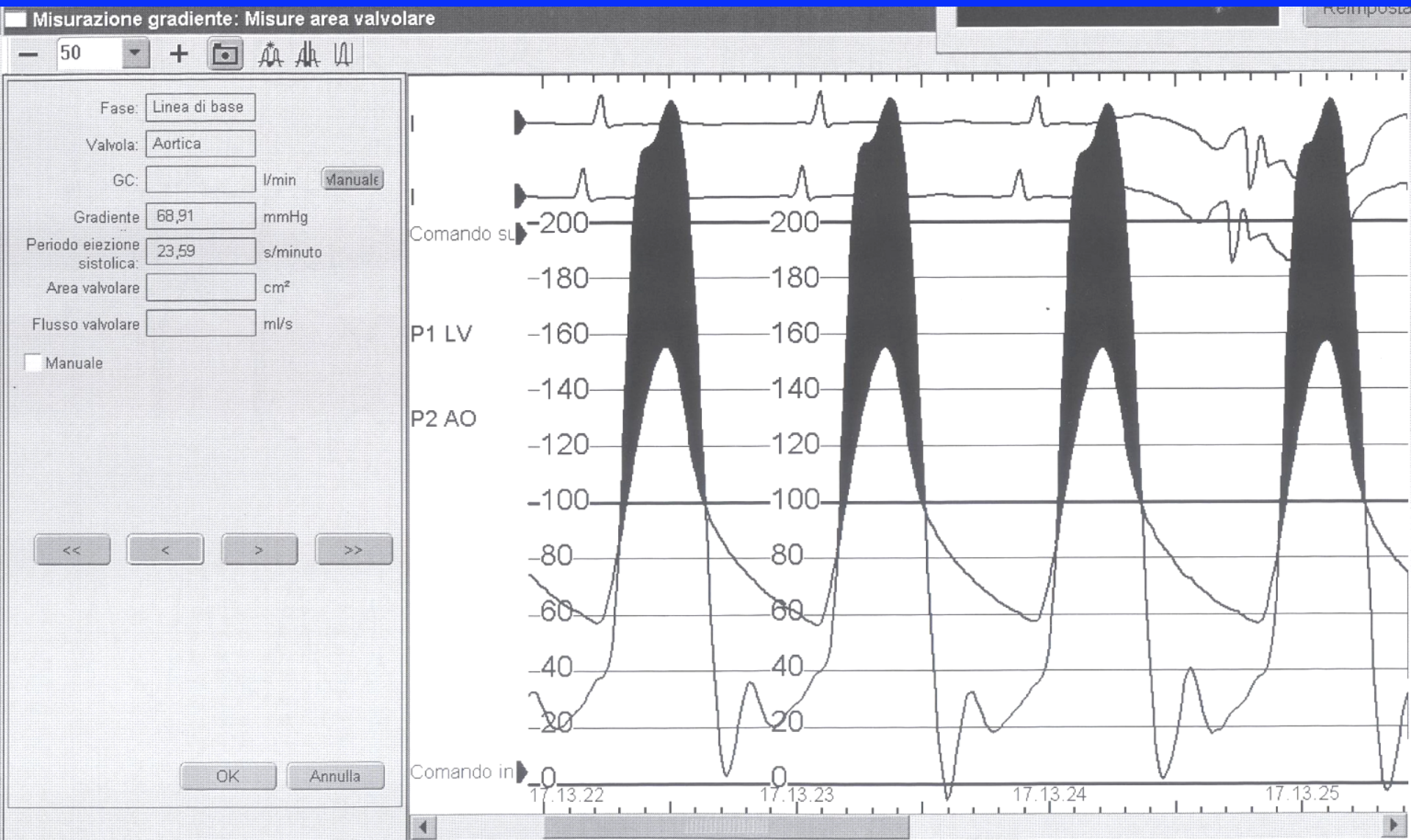


# Valvuloplastica Aortica: Effetti



Rottura dei noduli calcifici che creano dei punti cardini nelle cuspidi con il risultato di determinare una maggiore mobilità delle stesse

# Gradiente Medio TransValvolare: 69 mm Hg





# Gradiente Medio Post VAP: 33 mm Hg

Misurazione gradiente: Misure area valvolare

50 + [Icons]

Fase: Linea di base

Valvola: Aortica

GC: [ ] l/min

Gradiente: 33,16 mmHg

Periodo eiezione sistolica: 21,27 s/minuto

Area valvolare [ ] cm<sup>2</sup>

Flusso valvolare [ ] ml/s

Manuale

<<

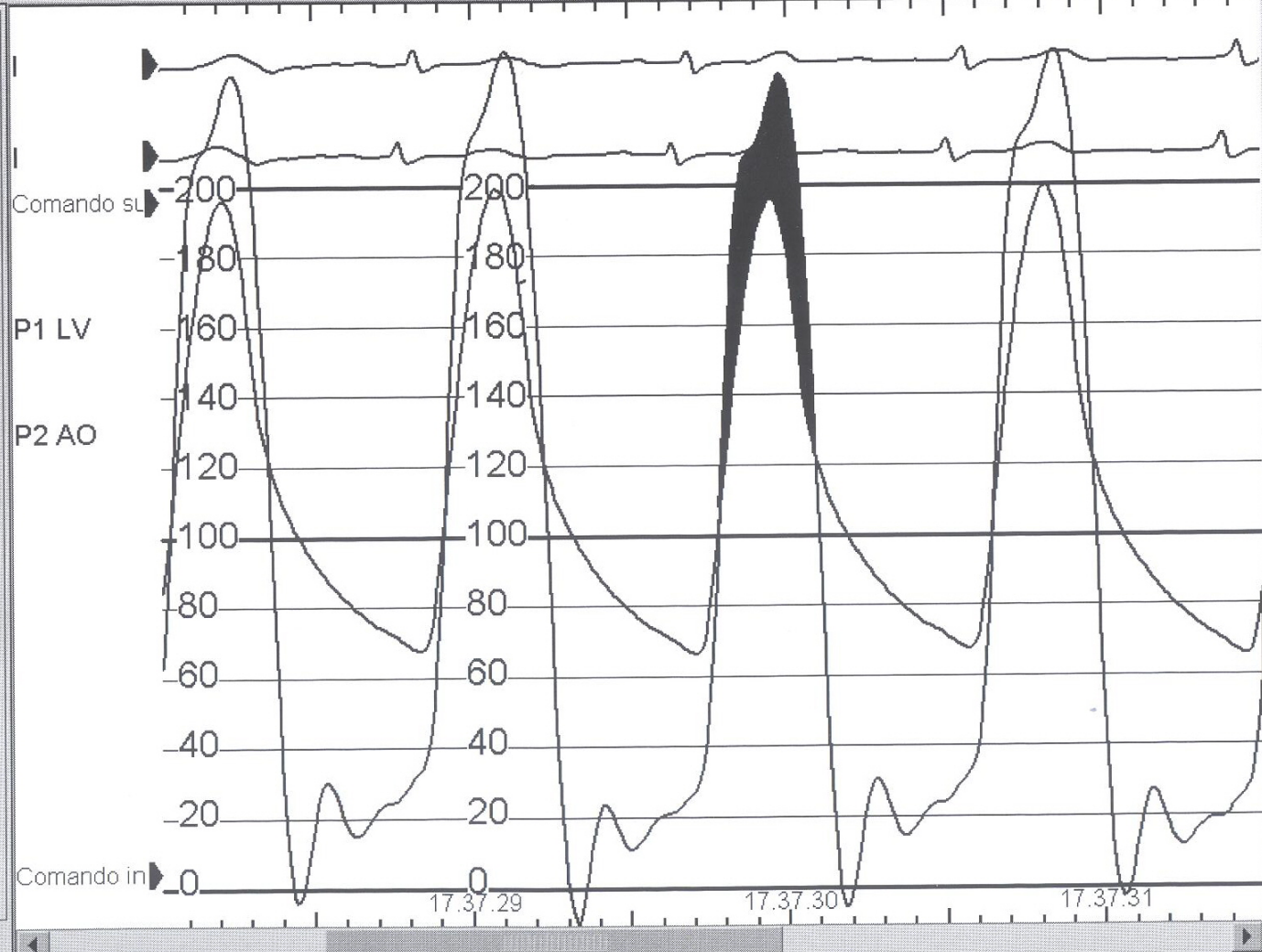
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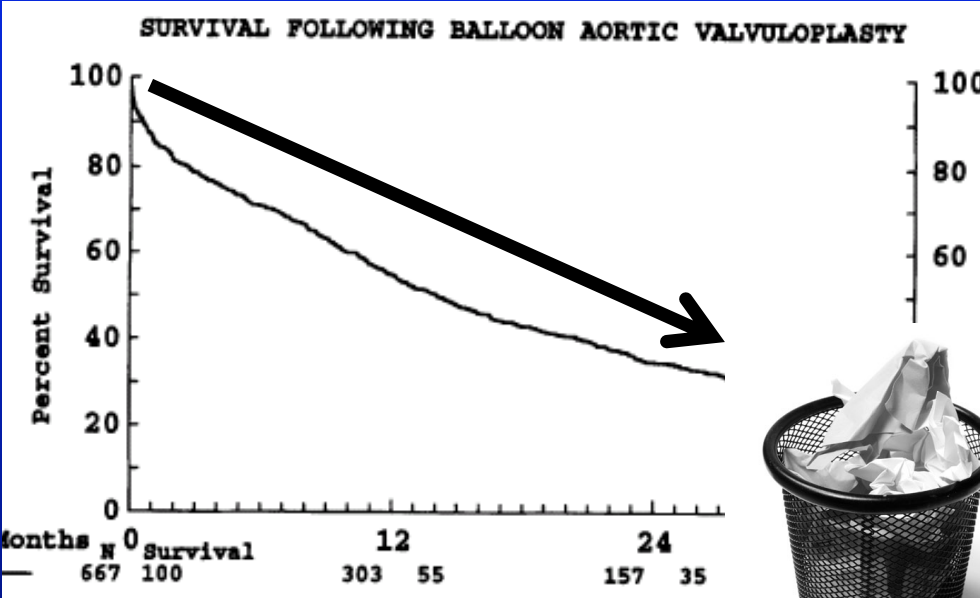
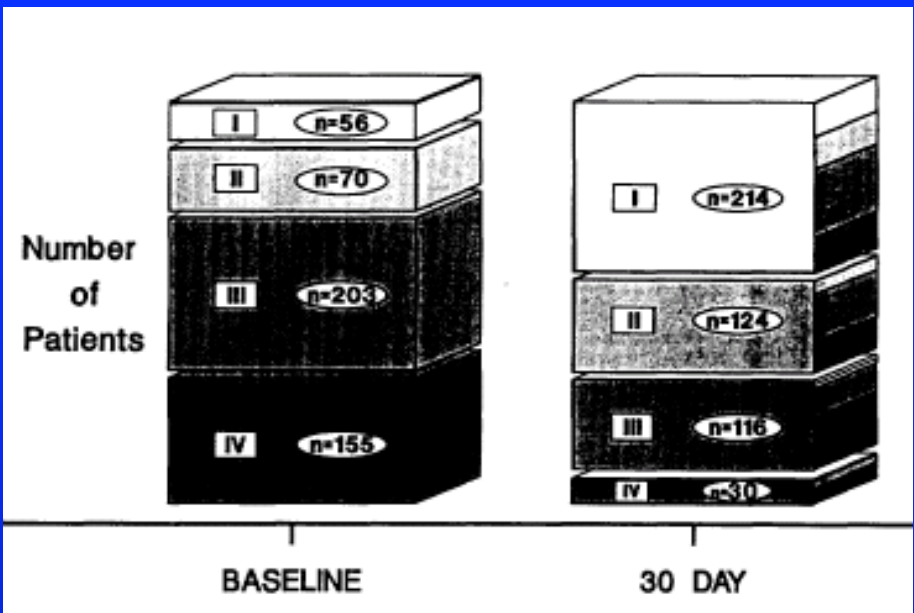
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OK

Annulla





NHLBI Registry, *Circulation* 1991; 84: 2383-2397



# Linee Guida ESC 2012: Indicazioni alla Valvuloplastica Aortica Percutanea

This intervention can be considered as a **bridge to surgery in haemodynamically unstable** patients who are at high risk for surgery (recomendations class IIb, level of evidence C)

or in patients with symptomatic severe AS who require **urgent major non cardiac surgery** (recomandations class IIb, level of evidence C)”

As a palliative measure in selected individual cases when surgery is controindicted because of severe comorbidities and TAVI is not an option



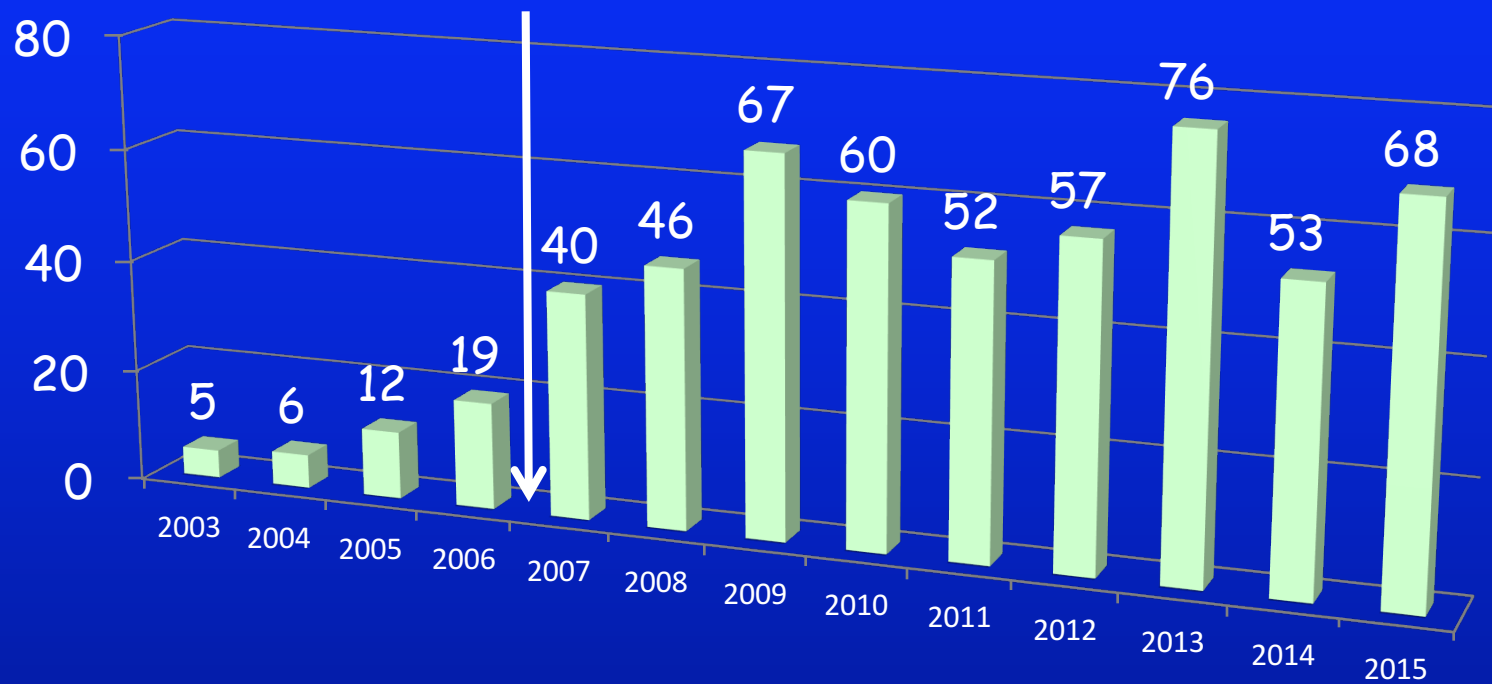
# **Percutaneous Balloon Aortic Valvuloplasty Revisited**

## **Time for a Renaissance?**

Hideiko Hara, MD; Wesley R. Pedersen, MD; Elena Ladich, MD; Michael Mooney, MD;  
Renu Virmani, MD; Masato Nakamura, MD; Ted Feldman, MD; Robert S. Schwartz, MD

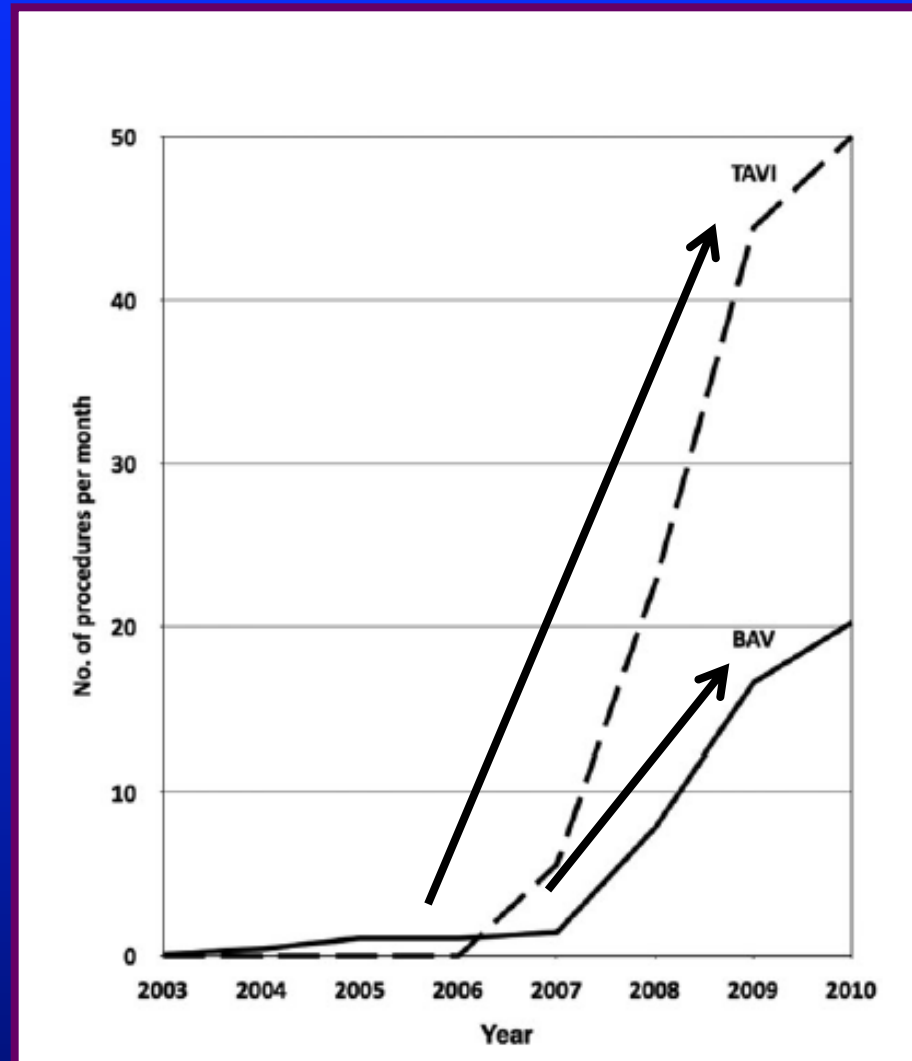


# Valvuloplastiche Aortiche Rimini: 2003 - 2015



## Standalone Balloon Aortic Valvuloplasty: Indications and Outcomes From the UK in the Transcatheter Valve Era

423 pts in 25 UK centers with TAVI program, 2003 - 2010



# Bridge Therapy

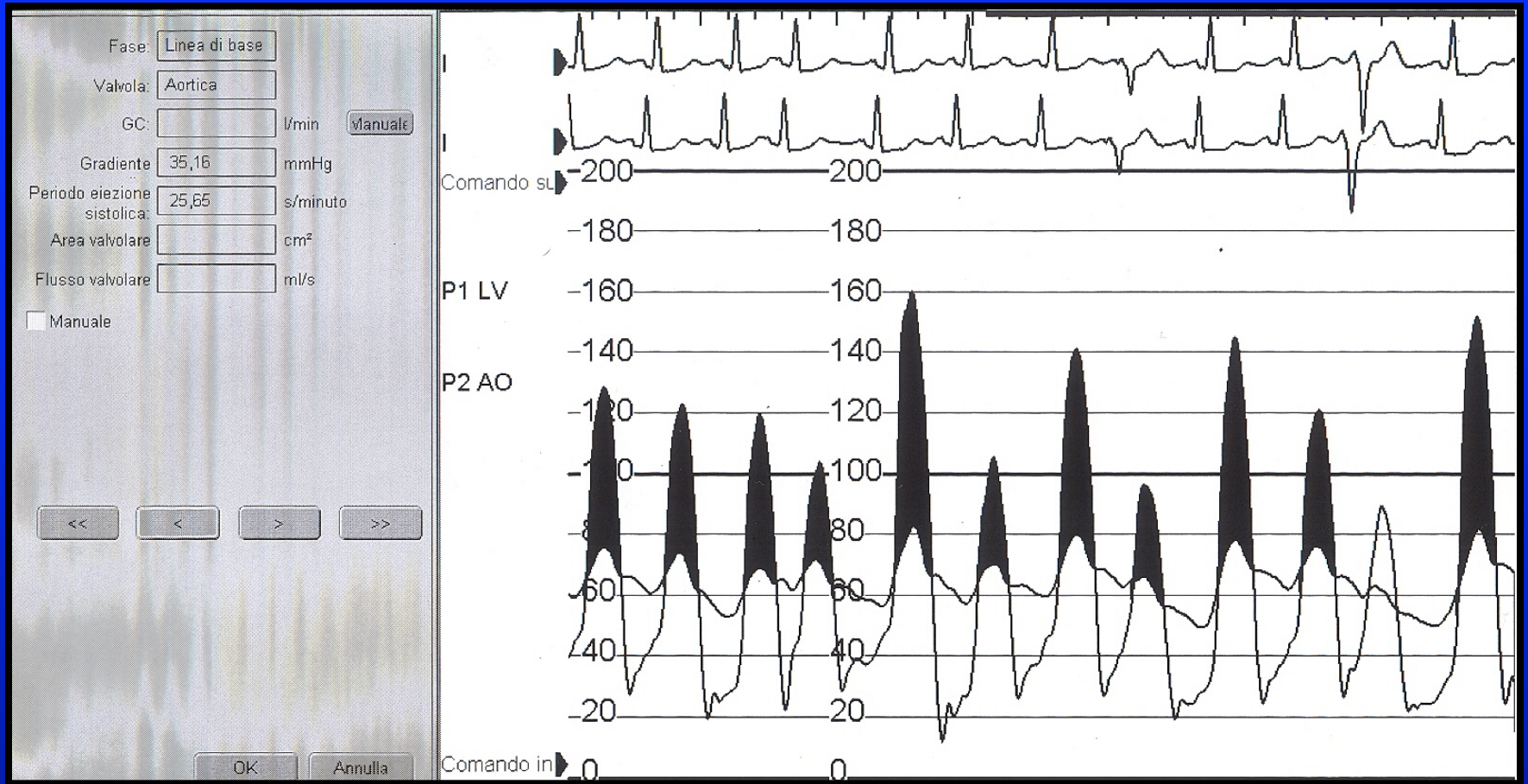


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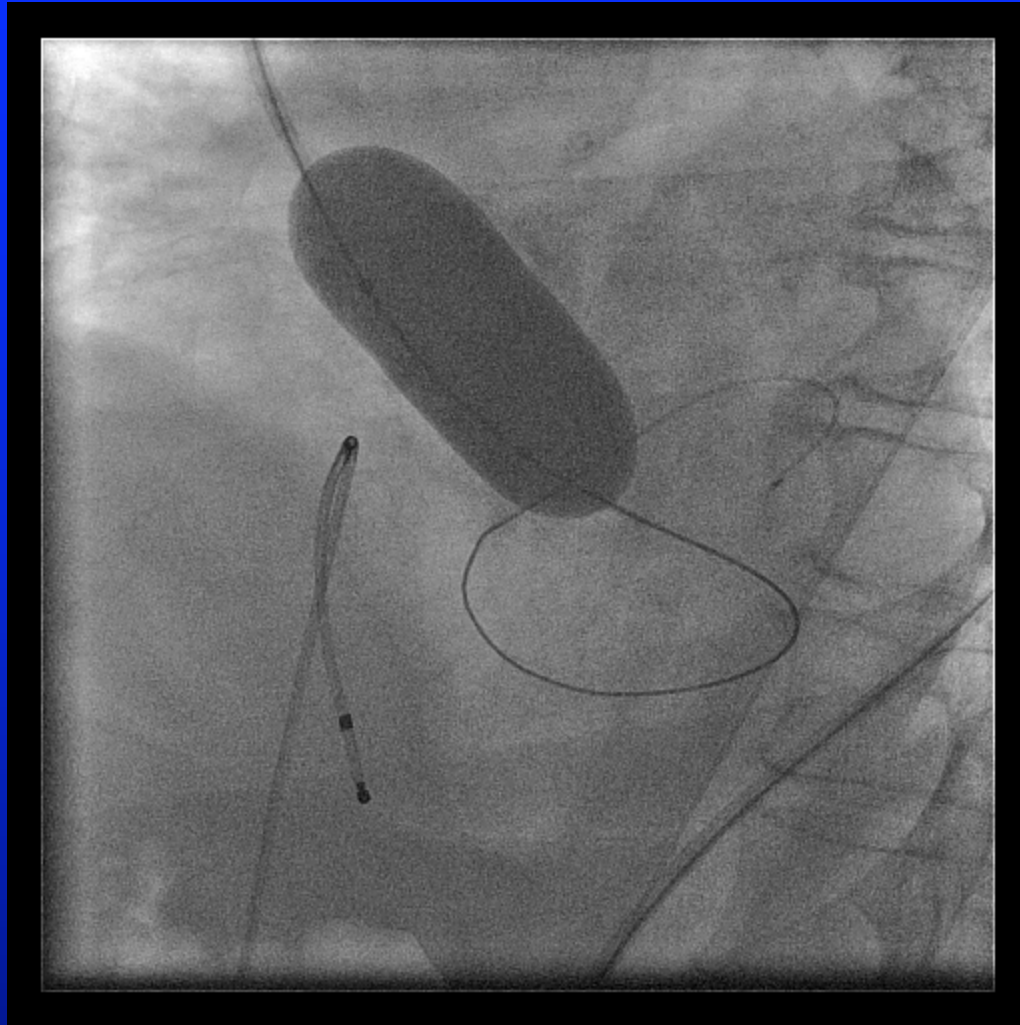
	No.(%) or mean (SD)
Age (years)	80.9 ± 8.5
Male	222 (52.5%)
Previous coronary artery disease	260 (61.5%)
Previous CABG	52 (12.3%)
Previous PCI	49 (11.6%)
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<b>Indication</b>	
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Bridge to TAVI	144 (34.0%)
Bridge to sAVR	54 (12.8%)
<b>Presentation</b>	
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Urgent	178 (42.1%)
Emergency	54 (12.8%)



# Pz in Shock: Gradiente Basale

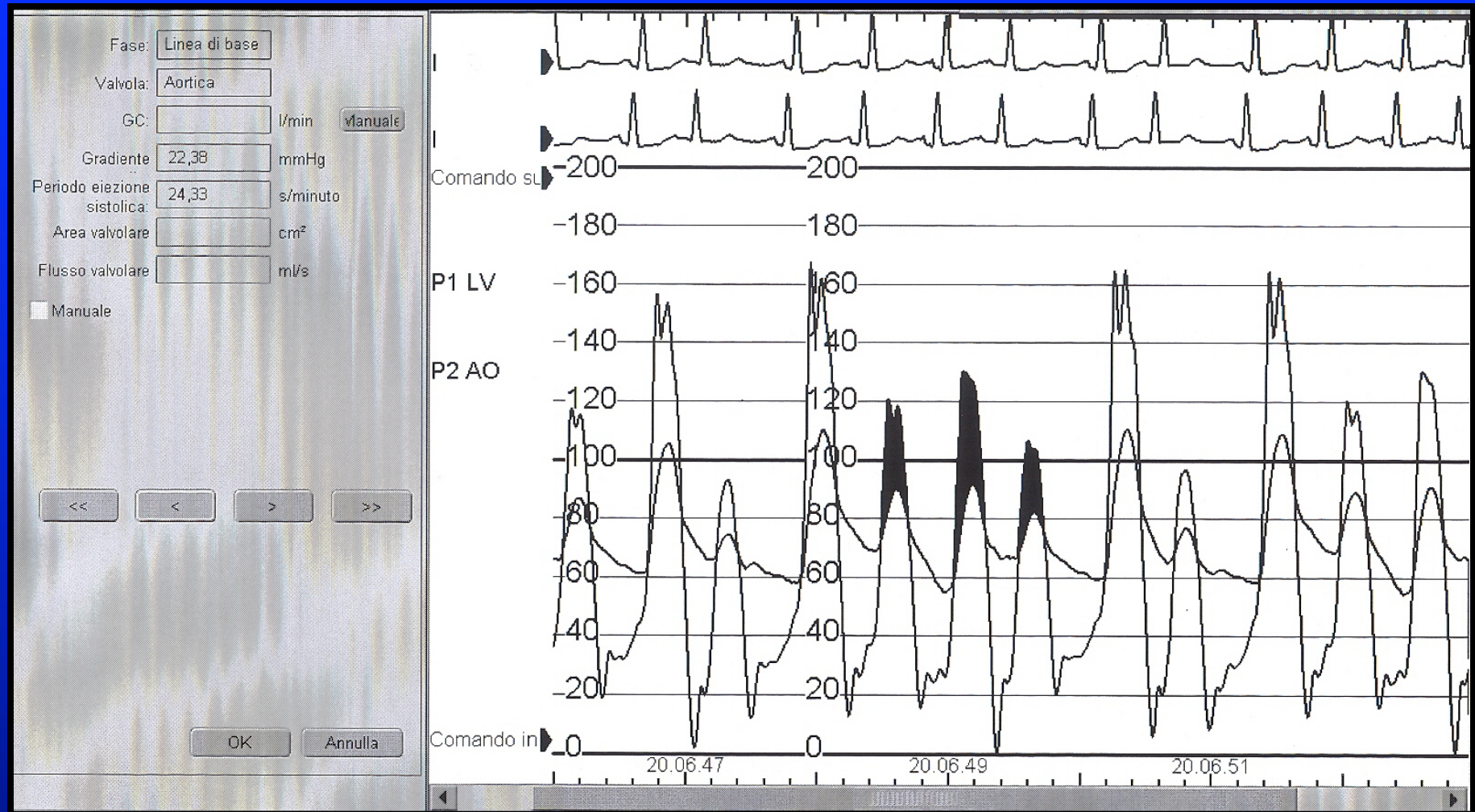


# Valvuloplastica in Emergenza



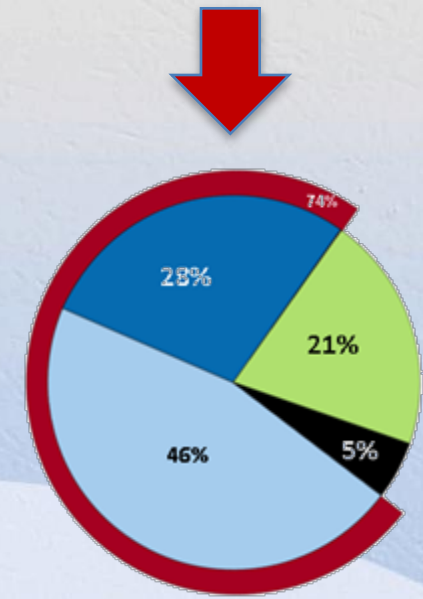
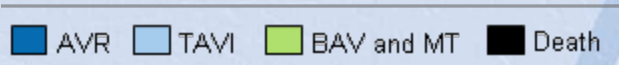
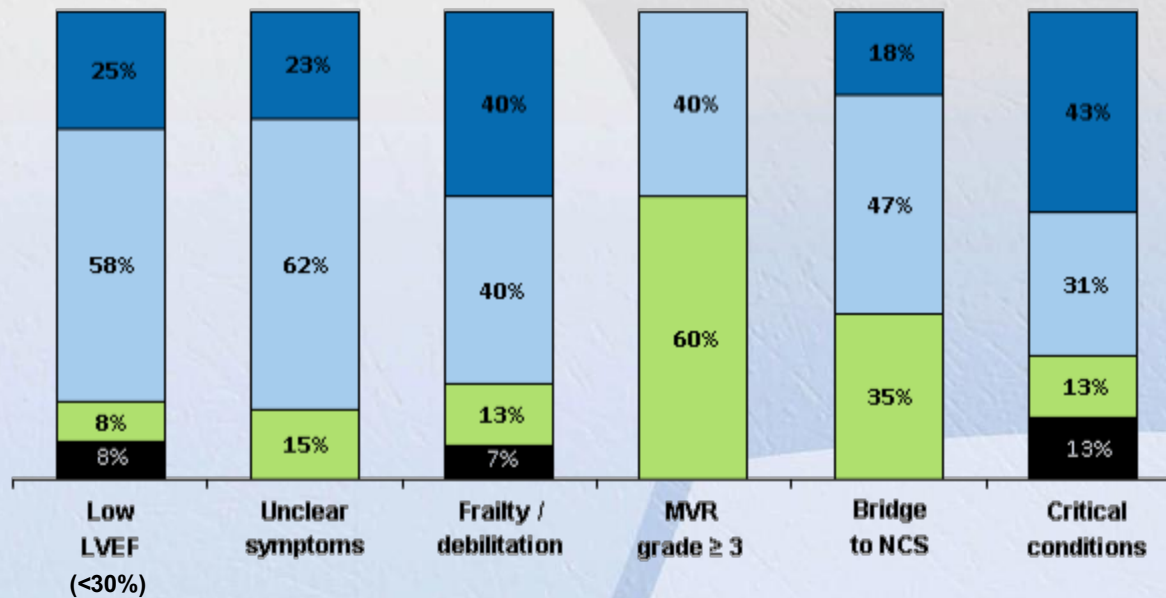


# Paziente in Shock: Gradiente post Valvuloplastica



# BAV in patients with temporary contraindications to TAVI

Reason for bridging and final outcome





# Destination Therapy



NON SONO VECCHIO.  
SONO DIVERSAMENTE  
GIOVANE.



Gli Altri Circa 57.000 ?????

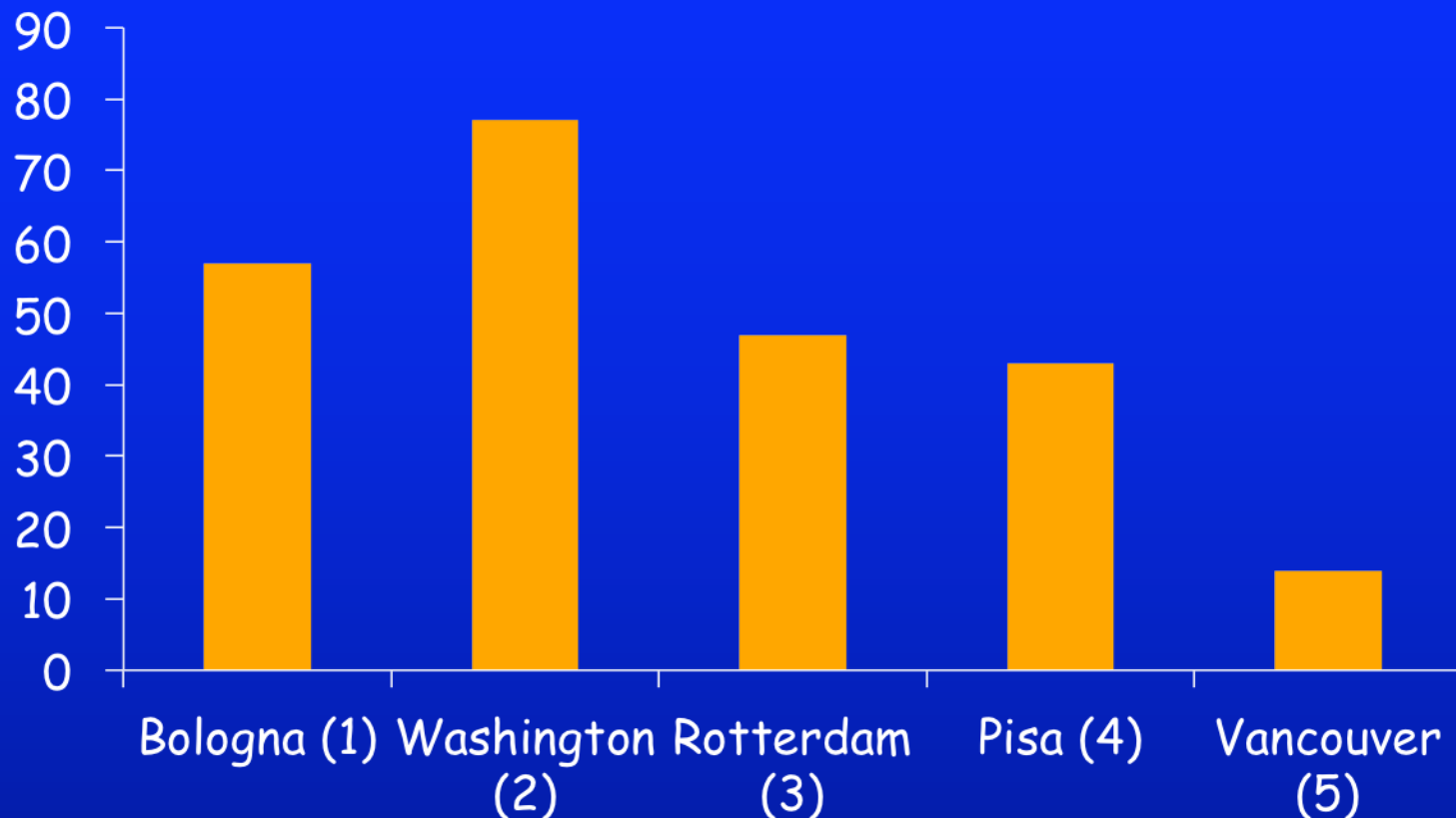
Italia 1.789.482 over 85 aa  
X 4%

= 71.579 pz con severa Stenosi Valv Aortica

circa 12.000 Chirurgia + circa 2.500 TAVI = 14.500

# Patients referred for TAVI not eligible to TAVI or AVR

## Insights from local registries



1. Saia F. et al. *J Cardiovasc Med* 2010;11:727-32

2. Ben-Dor I et al. *Circulation* 2010;122:S37-42

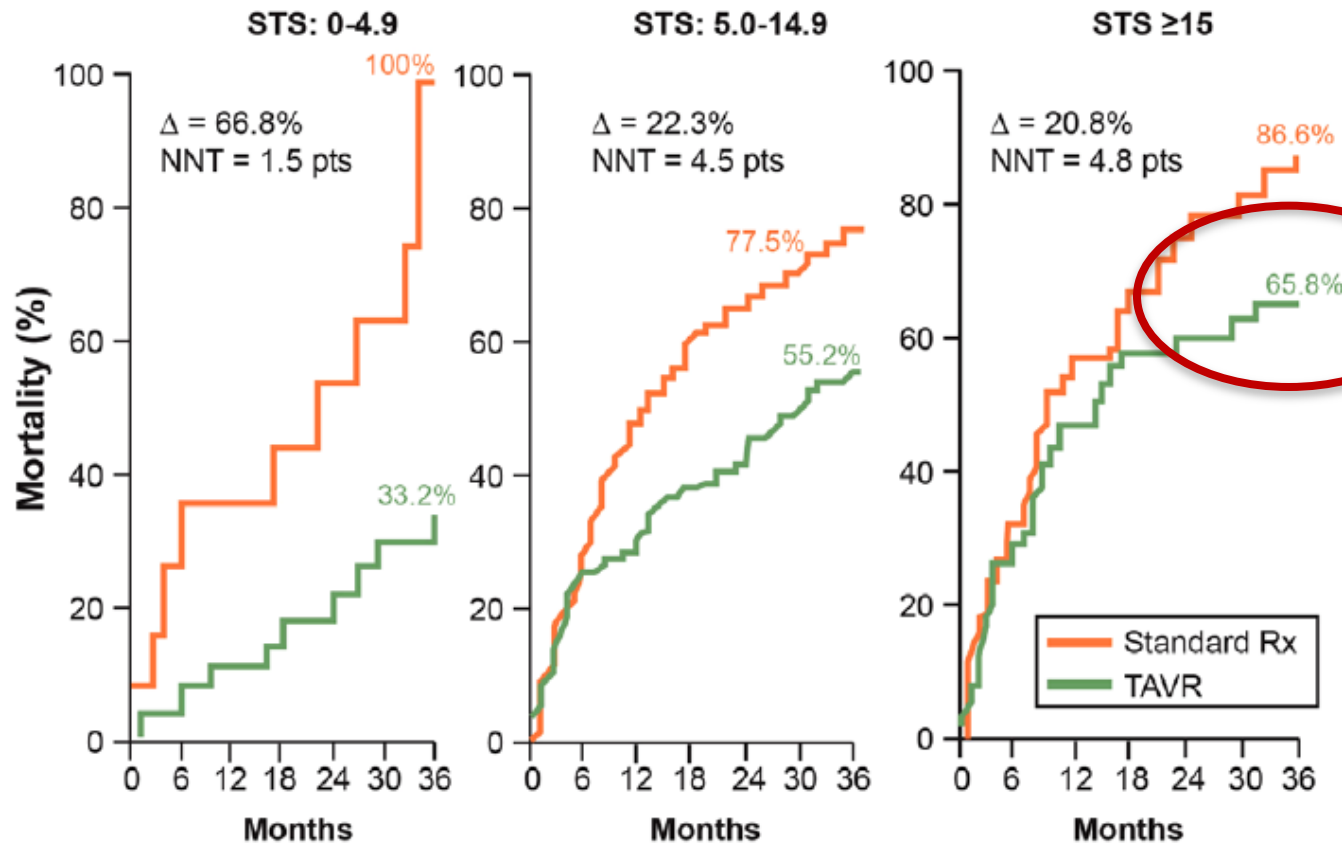
3. Otten AM et al. *Eurointervention* 2008;4:250-55

4. De Carlo M et al. *Eurointervention* 2010;6:168-74

5. Lauck S et al. *Eur J Cardiovasc Nurs* 2014;13:177-184

# Long-Term Outcomes of Inoperable Patients With Aortic Stenosis Randomly Assigned to Transcatheter Aortic Valve Replacement or Standard Therapy

Samir R. Kapadia, E. Murat Tuzcu, Raj R. Makkar, Lars G. Svensson, Shikhar Agarwal, Susheel Kodali, Gregory P. Fontana, John G. Webb, Michael Mack, Vinod H. Thourani, Vasilis C. Babaliaros, Howard C. Herrmann, Wilson Szeto, Augusto D. Pichard, Mathew R. Williams, William N. Anderson, Jodi J. Akin, D. Craig Miller, Craig R. Smith and Martin B. Leon





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One of the current clinical challenges is to better identify patients with severe comorbidities in whom TAVR may be considered futile (ie, with no or limited clinical utility).

patients with many comorbidities characterized by the highest Society of Thoracic Surgeons scores. The results of this study can inform symptomatic patients with severe aortic stenosis who are deemed inoperable (or an extreme surgical risk) that treatment with this first-generation TAVR procedure will prolong life, improve functional status, and prevent hospitalizations from heart failure and that the valve is durable over at least 3 years follow-up. One of the current clinical challenges is to better identify patients with severe comorbidities in whom TAVR may be considered futile (ie, with no or limited clinical utility).

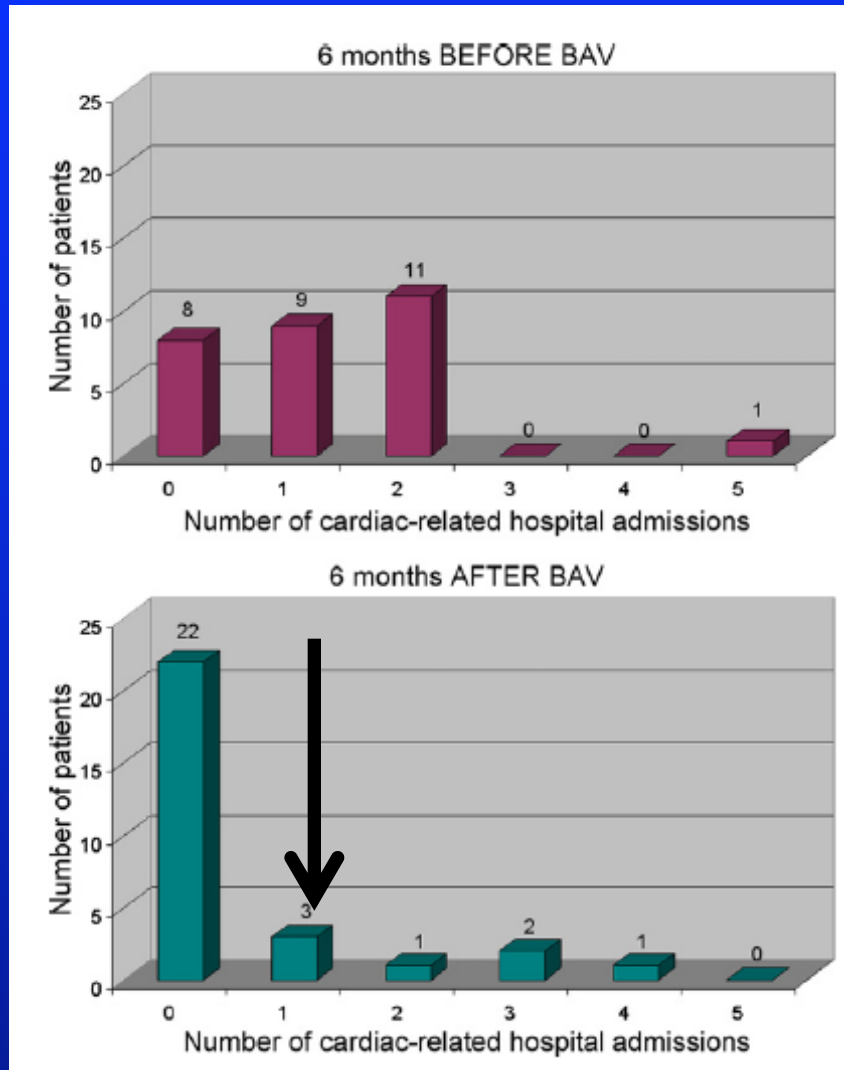
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As **a palliative measure** in selected individual cases when surgery is controindicted because of severe comorbidities and TAVI is not an option

# BAV as destination therapy (palliation)



*Over three-quarters of the patients had no hospital admission in the 6 months after BAV*

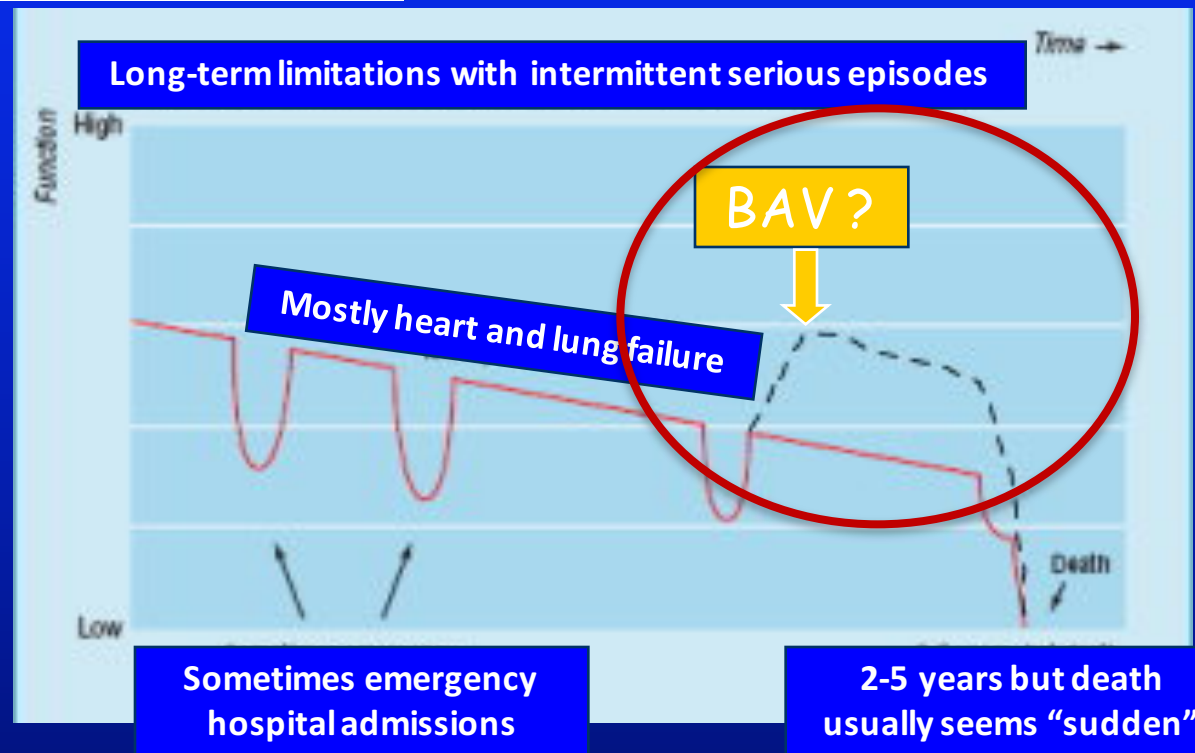
# Editorial Comment

## Palliative Percutaneous Aortic Valvuloplasty or Replacement in the Elderly: Saving Mrs. Ryan

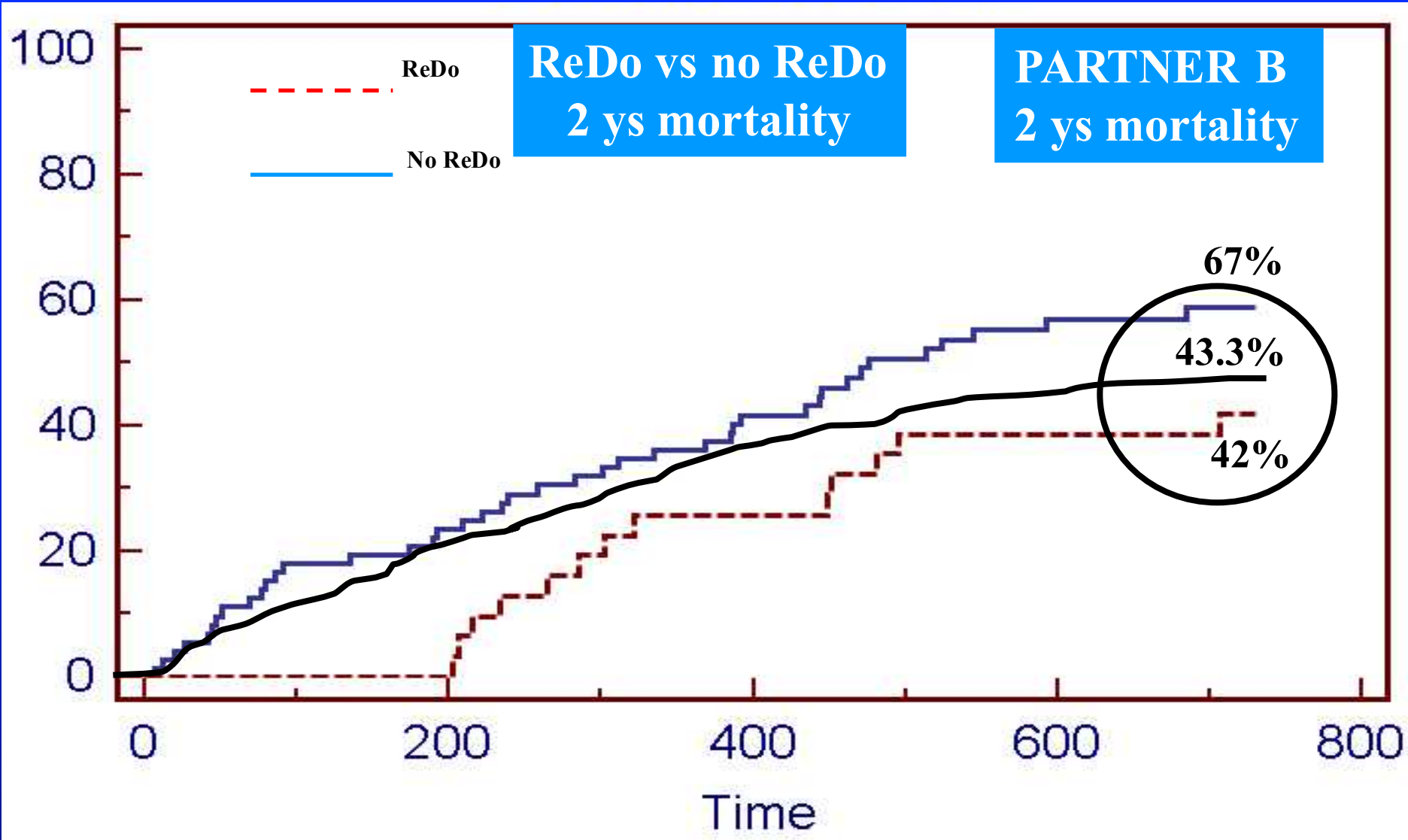
Walter A. Tan, MD, MS

Departments of Medicine and Surgery, East Carolina University, Greenville, North Carolina

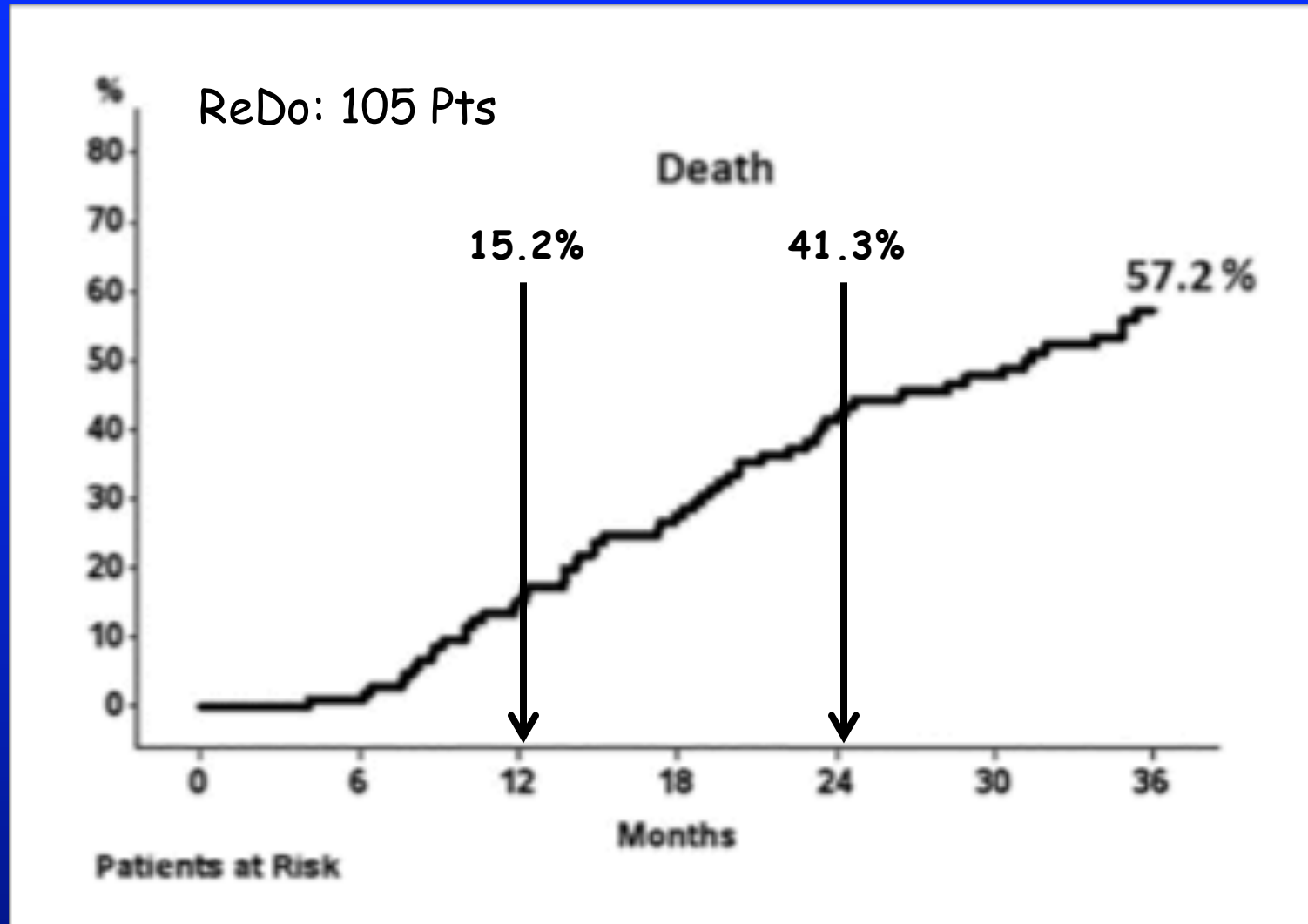
Catheter Cardio Interv 2007; 70:617-618



# Valvuloplastiche Pz over 85: Mortalità



# Repeated Aortic Balloon Valvuloplasty in Elderly Patients With Aortic Stenosis Who Are Not Candidates for Definitive Treatment



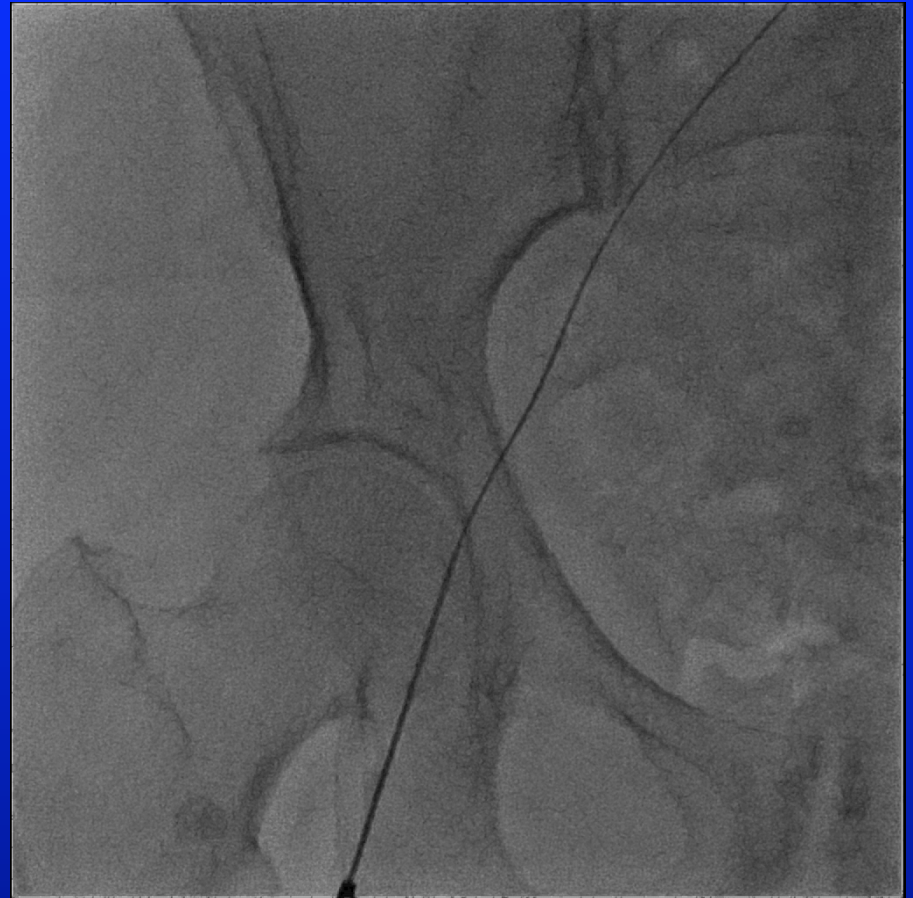
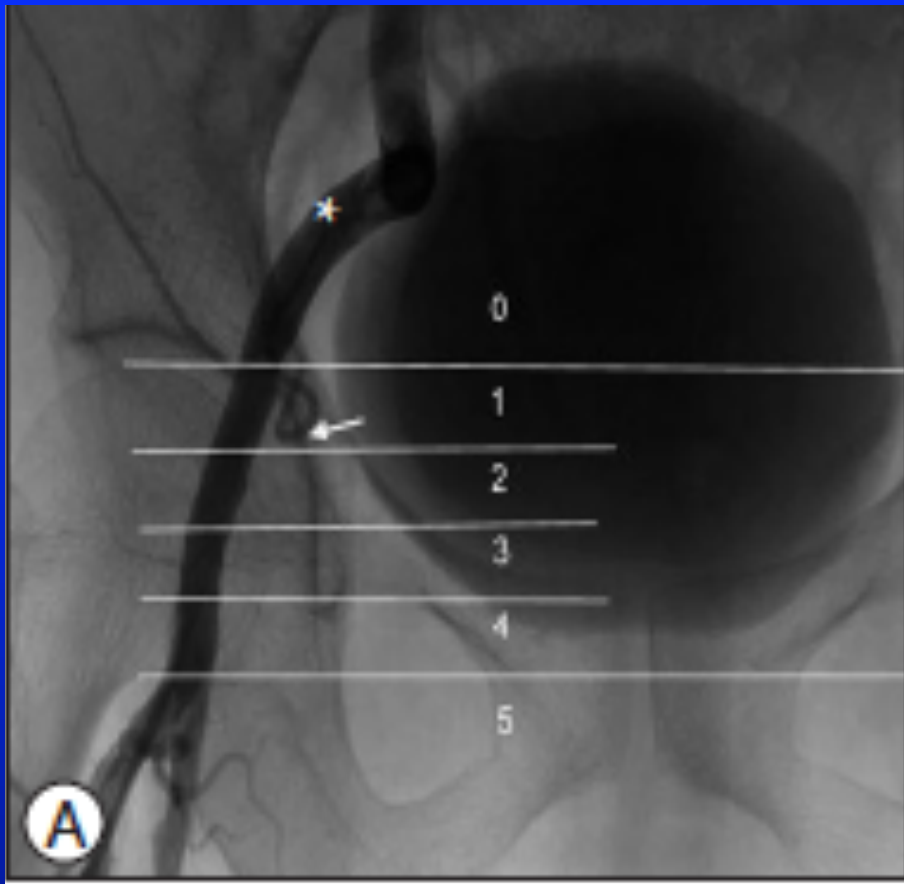


## Standalone Balloon Aortic Valvuloplasty: Indications and Outcomes From the UK in the Transcatheter Valve Era

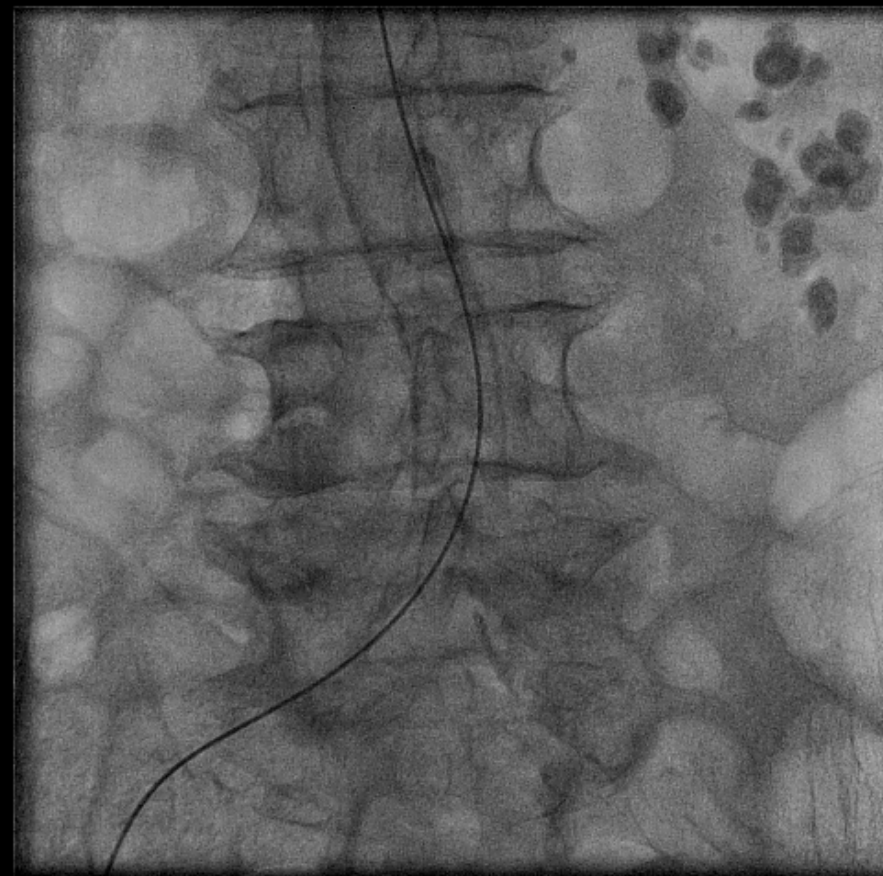
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Tecniche

# Accesso Femorale: Puntura con Repere Anatomico



# Accesso Femorale



# Accessi Femorale



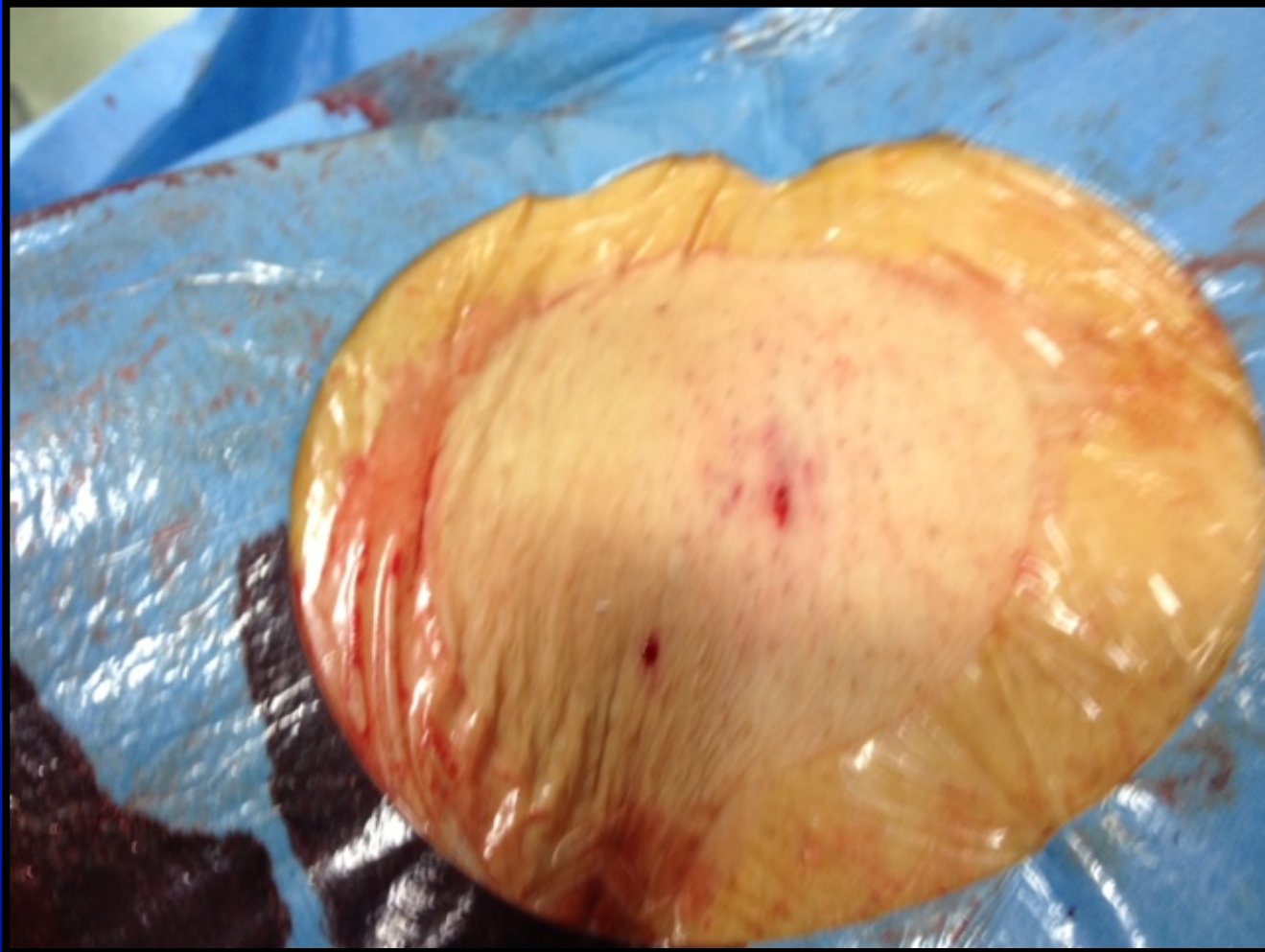


# Palloni Valvuloplastica ed Introduuttori



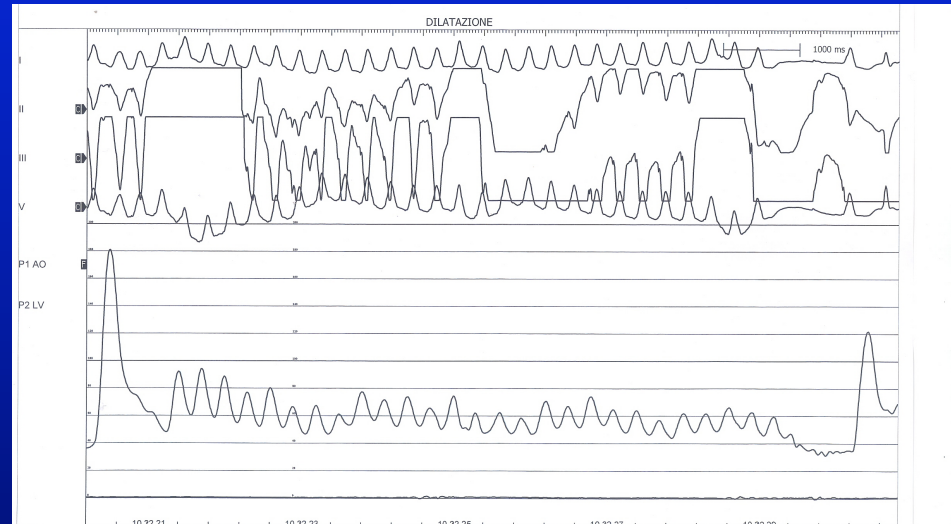
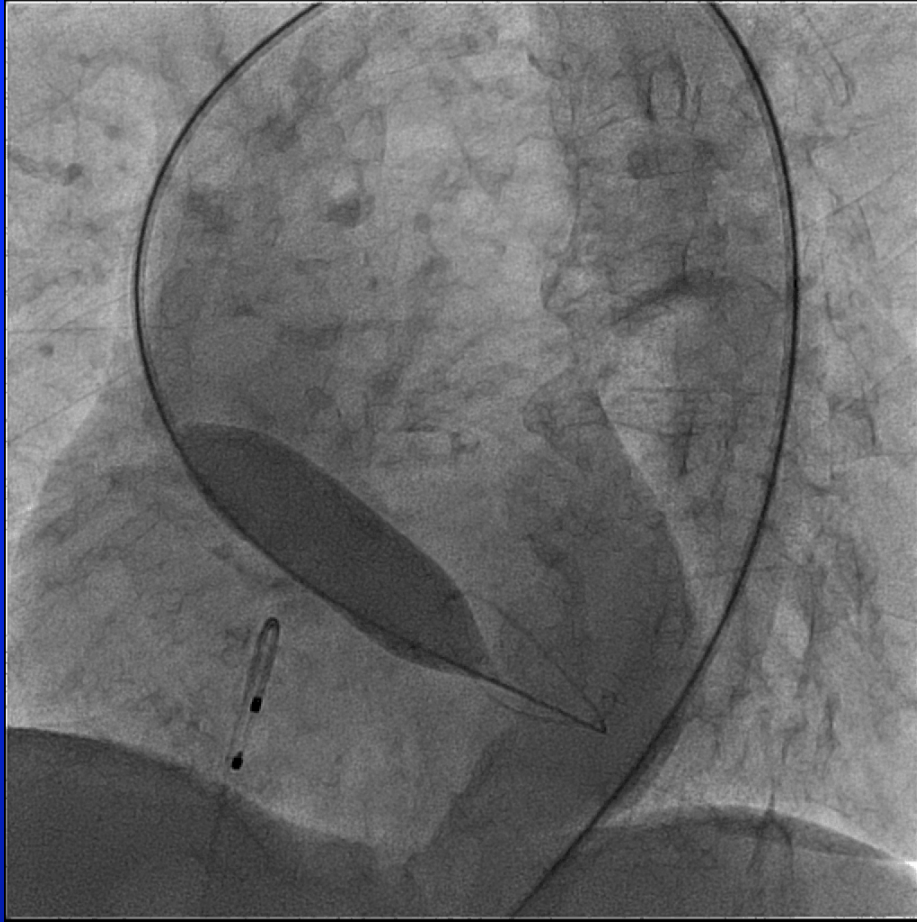
Reference	Balloon Ø x L (mm)	Catheter shaft	Recommended pressure	Guide-wire	Balt IVA	Units per Box		
	15 x 40	7F	6 bars	.038"	8F	2	0	0
	18 x 40	7F	5 bars	.038"	9F	2	0	0
	20 x 45	7F	5 bars	.038"	9F	2		
	23 x 45	9F	4 bars	.038"	10F	2	0	0
	25 x 50	9F	4 bars	.038"	10F	2	0	0
	28 x 50	9F	3 bars	.038"	10F	2	0	0
	30 x 60	9F	3 bars	.038"	10F	2	0	0
	35 x 60	9F	3 bars	.038"	.	2		
	40 x 40	9F	3 bars	.038"	.	2	0	0

# Emostasi con Sutura Percutanea e Tecnica Pre-Close

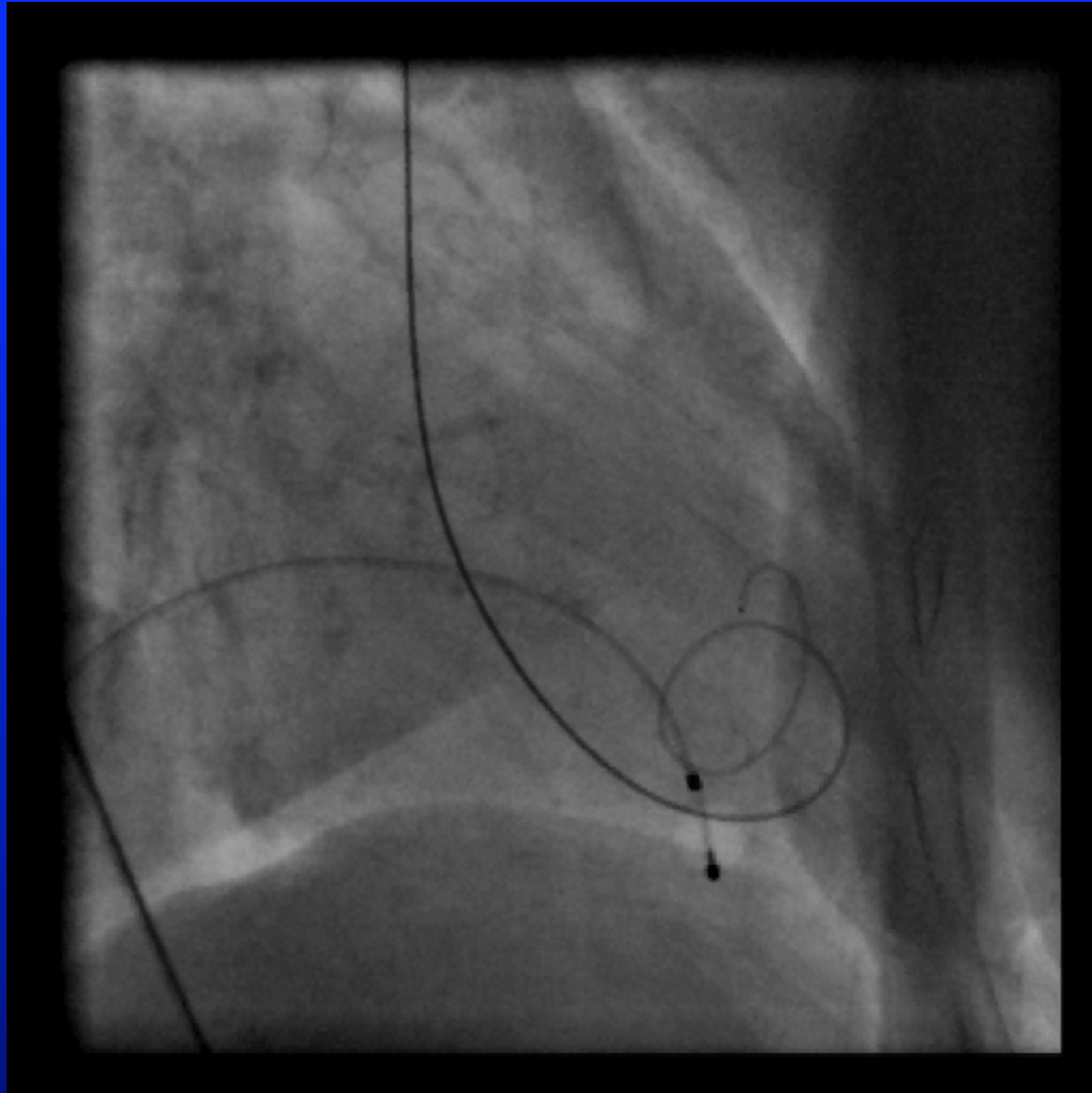


# Tecnica Semplificata

## Rapid Pacing



# Pacing: PM con Palloncino



Risultati



È UN AFFARE  
BENIGNO  
O MALIGNO,  
DOTTORE?

SMETTIAMOLA  
CON I DISTINGUO.



# Outcome Ospedaliero

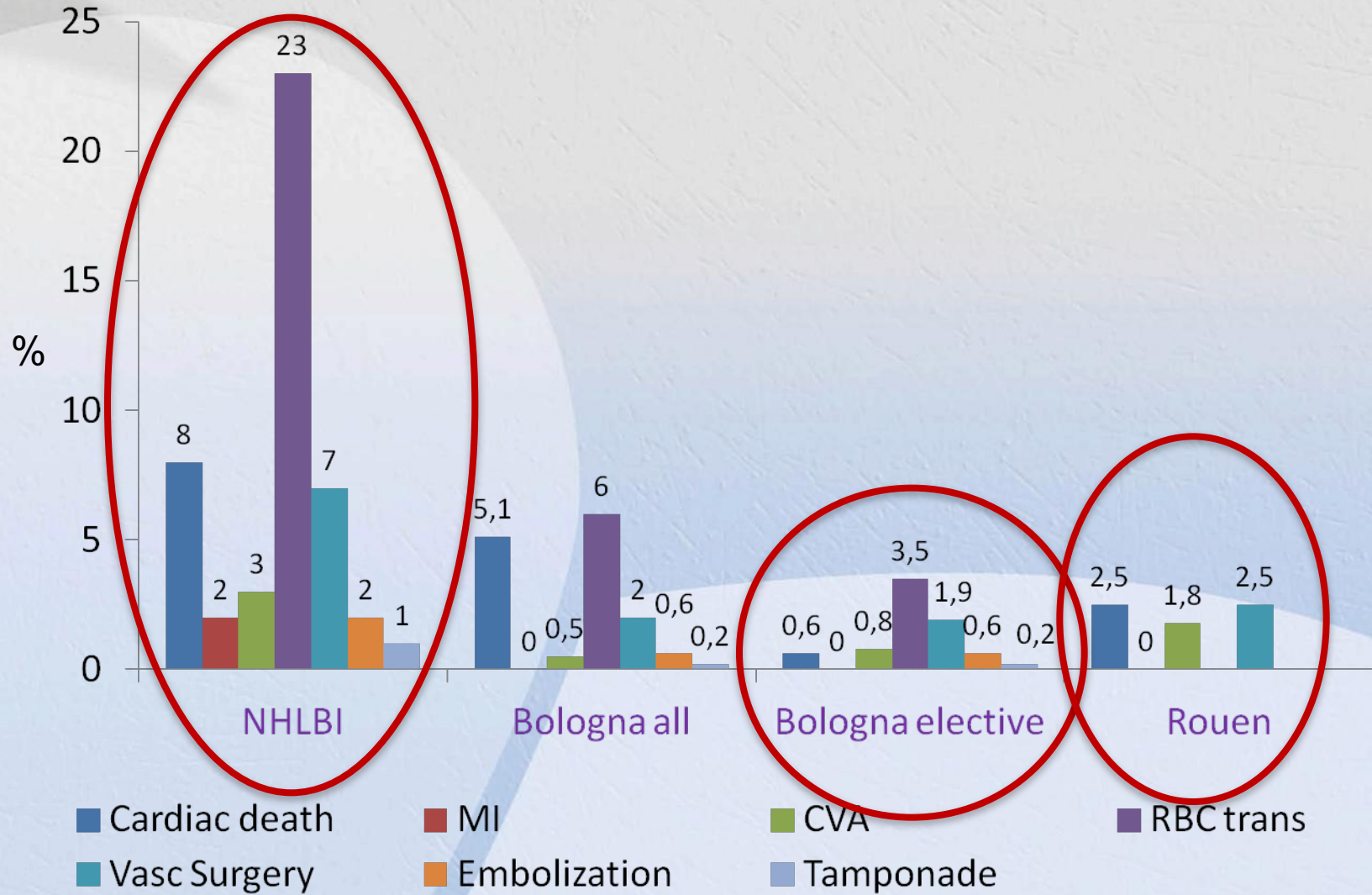
Complication	n (%)		
Death	17 (3)	Respiratory	
Patients with any severe complication	167 (25)	Intubation	28 (4)
Type of complication		Arrhythmia	
Hemodynamic		Treatment required	64 (10)
Prolonged hypotension	51 (8)	Persistent bundle-branch block	34 (5)
CPR required	26 (4)	AV block requiring pacing	30 (4)
Pulmonary edema	19 (3)	VF or VT requiring countershock	18 (3)
Cardiac tamponade	10 (1)	Vascular	
IABP use	11 (2)	Significant hematoma	44 (7)
Acute valvular insufficiency		Vascular surgery performed	33 (5)
Aortic	6 (1)	Systemic embolic event	11 (2)
Mitral	1 (0.1)	Transfusion required	136 (20)
Cardiogenic shock	15 (2)	Ischemic	
Neurological		Prolonged angina	9 (1)
Vasovagal reaction	36 (5)	Acute myocardial infarction	10 (1)
Seizure	15 (2)	Other severe complications	
Transient loss of consciousness	4 (0.6)	Pulmonary artery perforation	1 (0.1)
Focal neurological event	13 (2)	Acute tubular necrosis	1 (0.1)

**Standalone Balloon Aortic Valvuloplasty: Indications and Outcomes From the UK in the Transcatheter Valve Era**

## Major Complications (6.3%)

- Death: 2.4%
- Cardiac Tamponade: 1.0%
- Stroke: 1.0%
- Surgical Vascular Access Repair: 1.0%
- Transfusion  $\geq$  2 Units Packed Red Cells: 1.2%

# BAV is “safe”!



# Rimini: Outcome Intra-Ospedaliero (Febbraio 2016)

565 VAP Consecutive in 446 pz (età media 85, range 43-100)

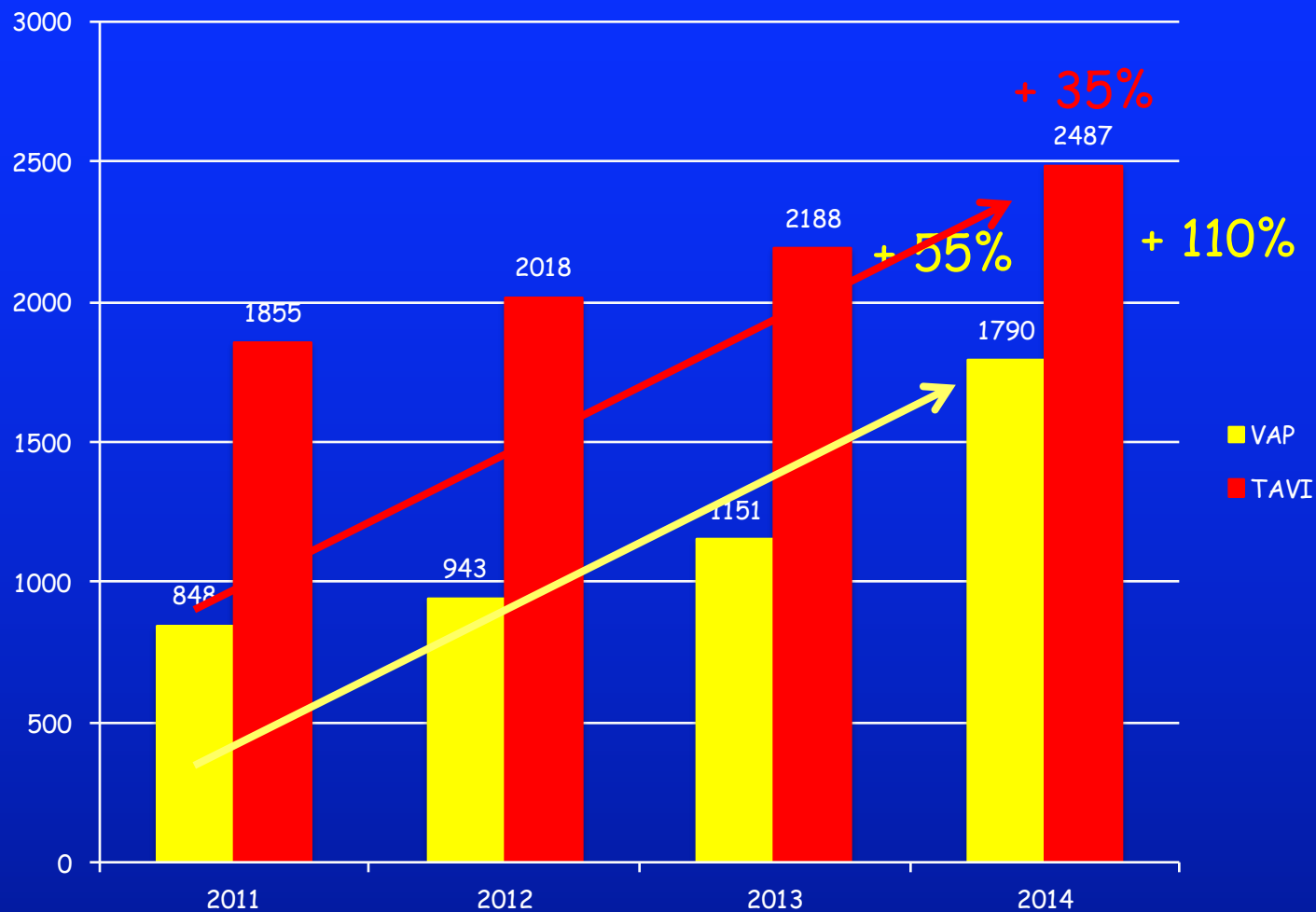
3 pz 5 volte, 5 pz 4 volte, 18 pz 3 volte, 56 pz 2 volte: Tot 82 pz con multiple procedure

	N	%
Tamponamenti	8	1.4
Compl Vasc Magg. (Chir. e/o Trasf)	5	0.8
NSTEMI	2	0.3
Ictus/TIA	2	0.3
Insufficienza Aortica Severa	2	0.3
Decessi Intra H	15	2.6

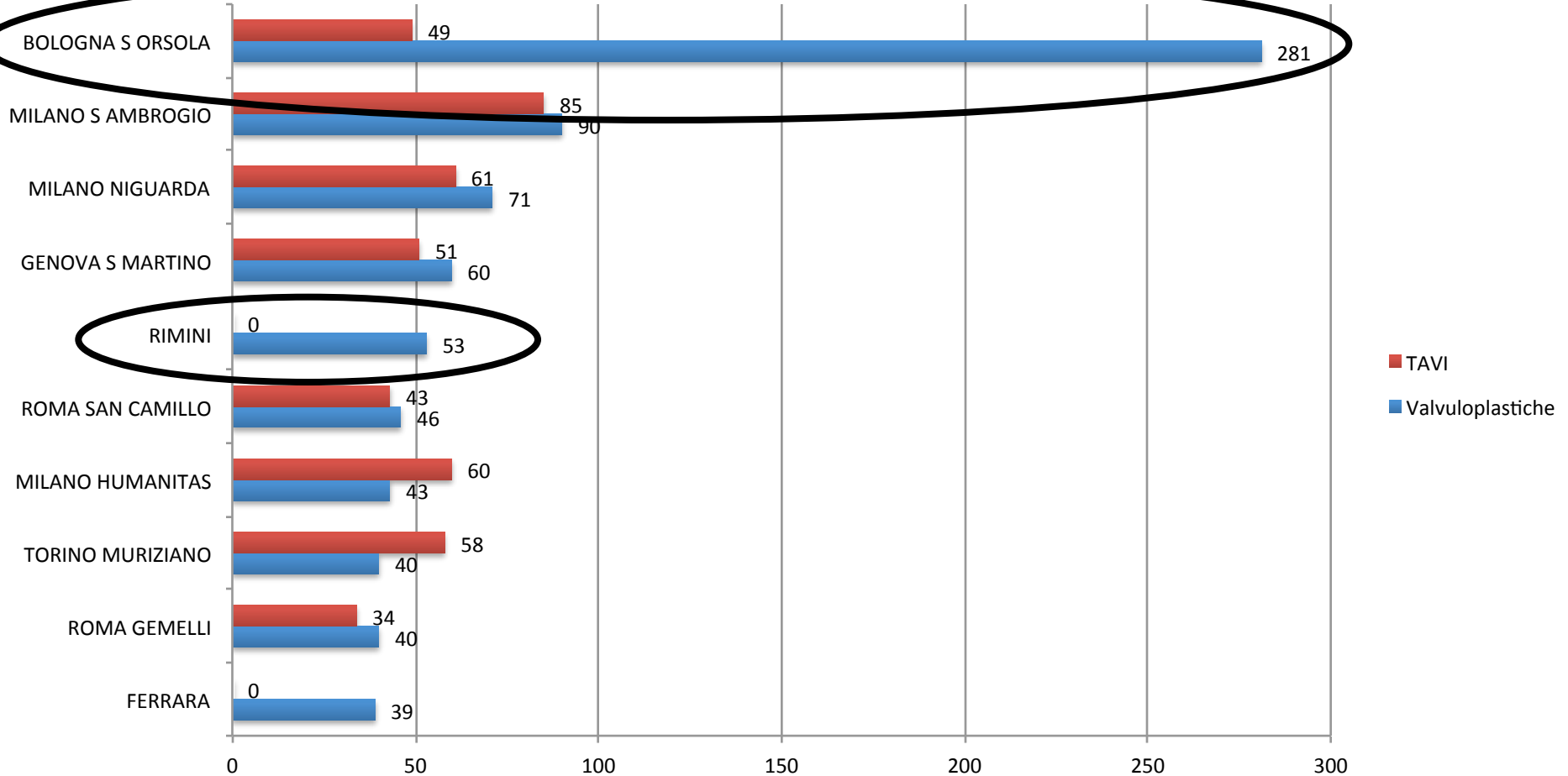


Un po' di numeri in Italia....

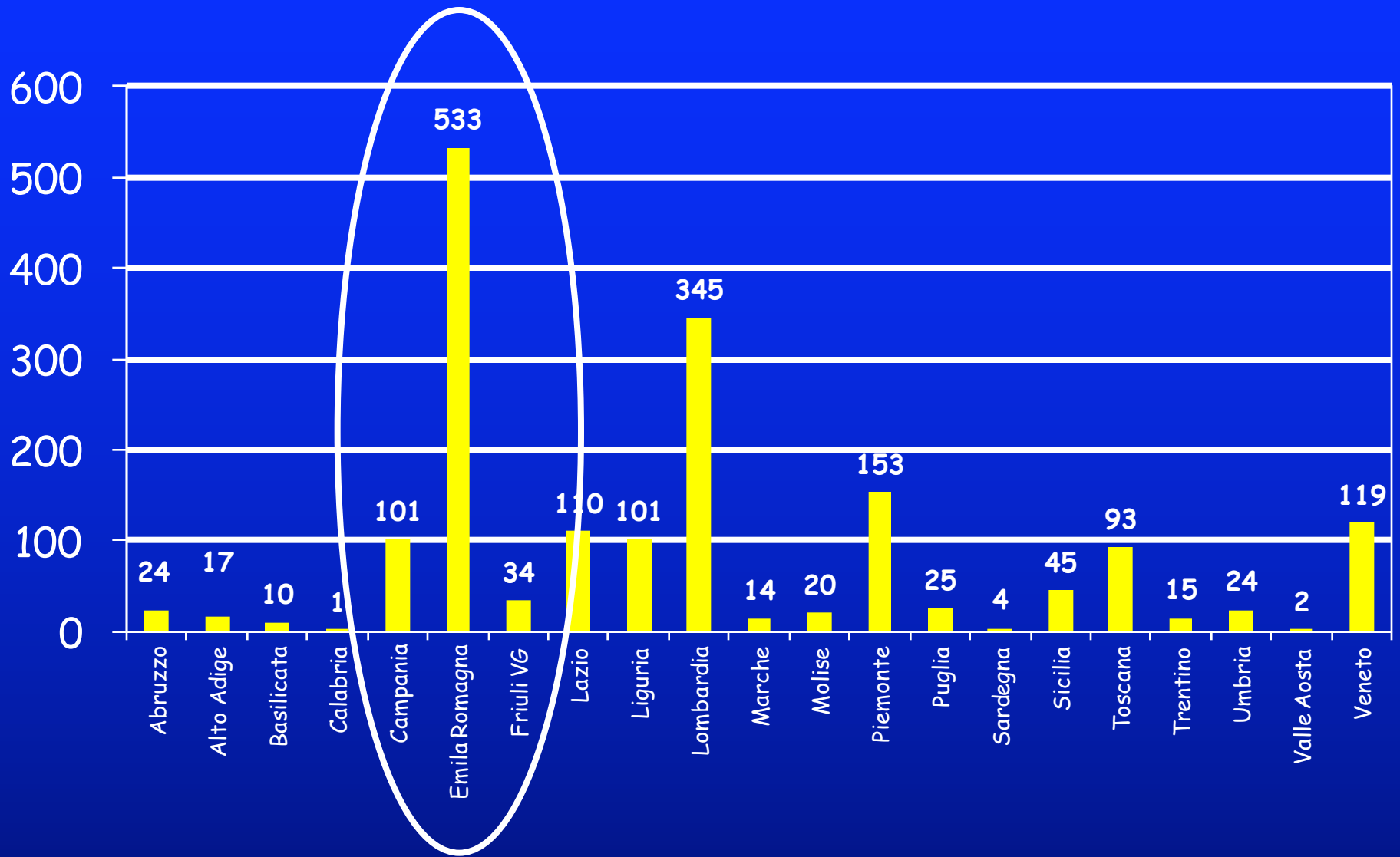
# Valvuloplastiche "Alone" e TAVI: Italia 2011- 2014



# Valvuloplastiche e TAVI Italia 2014

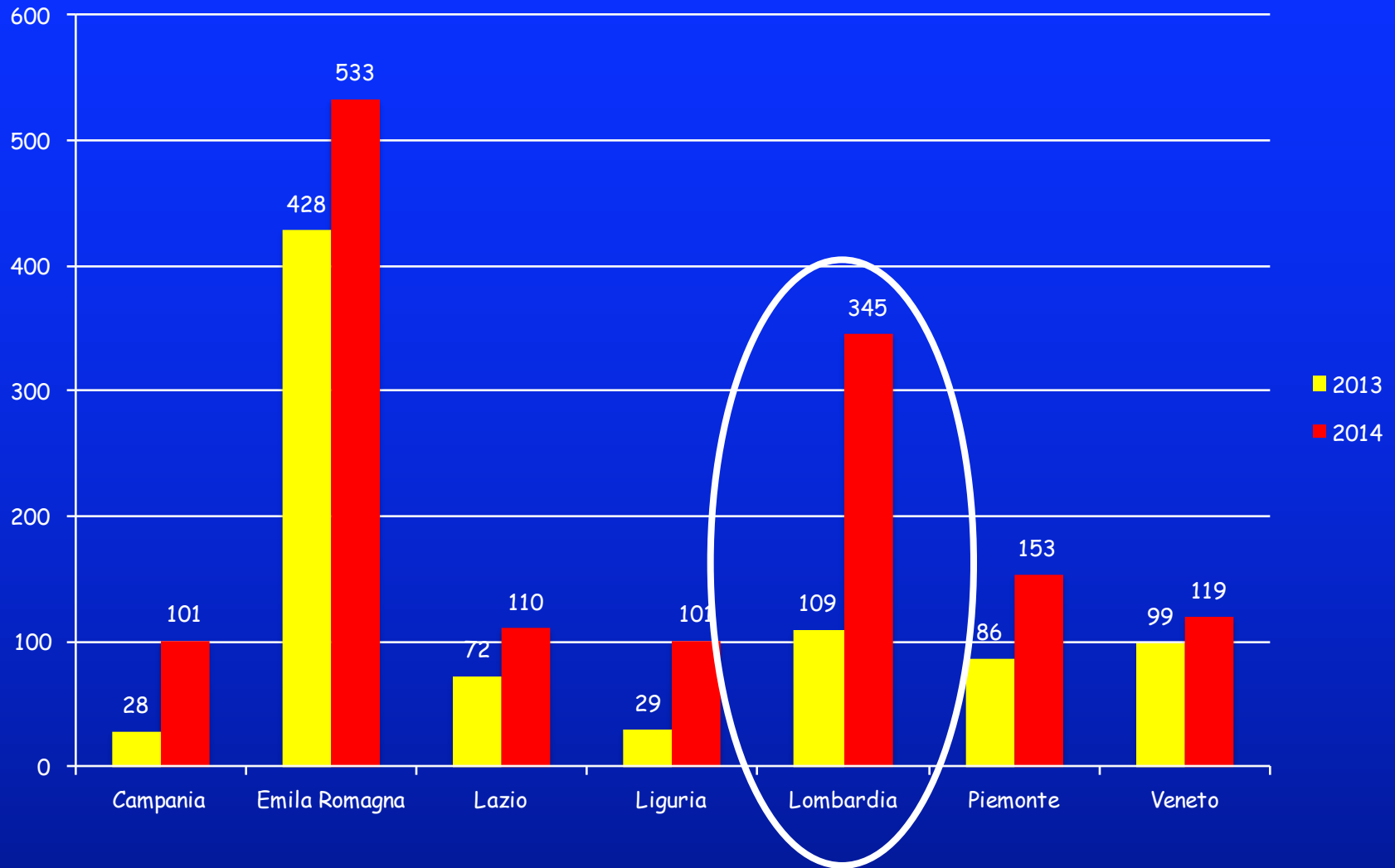


# Valvuloplastiche Italia 2014: Italia/Regioni

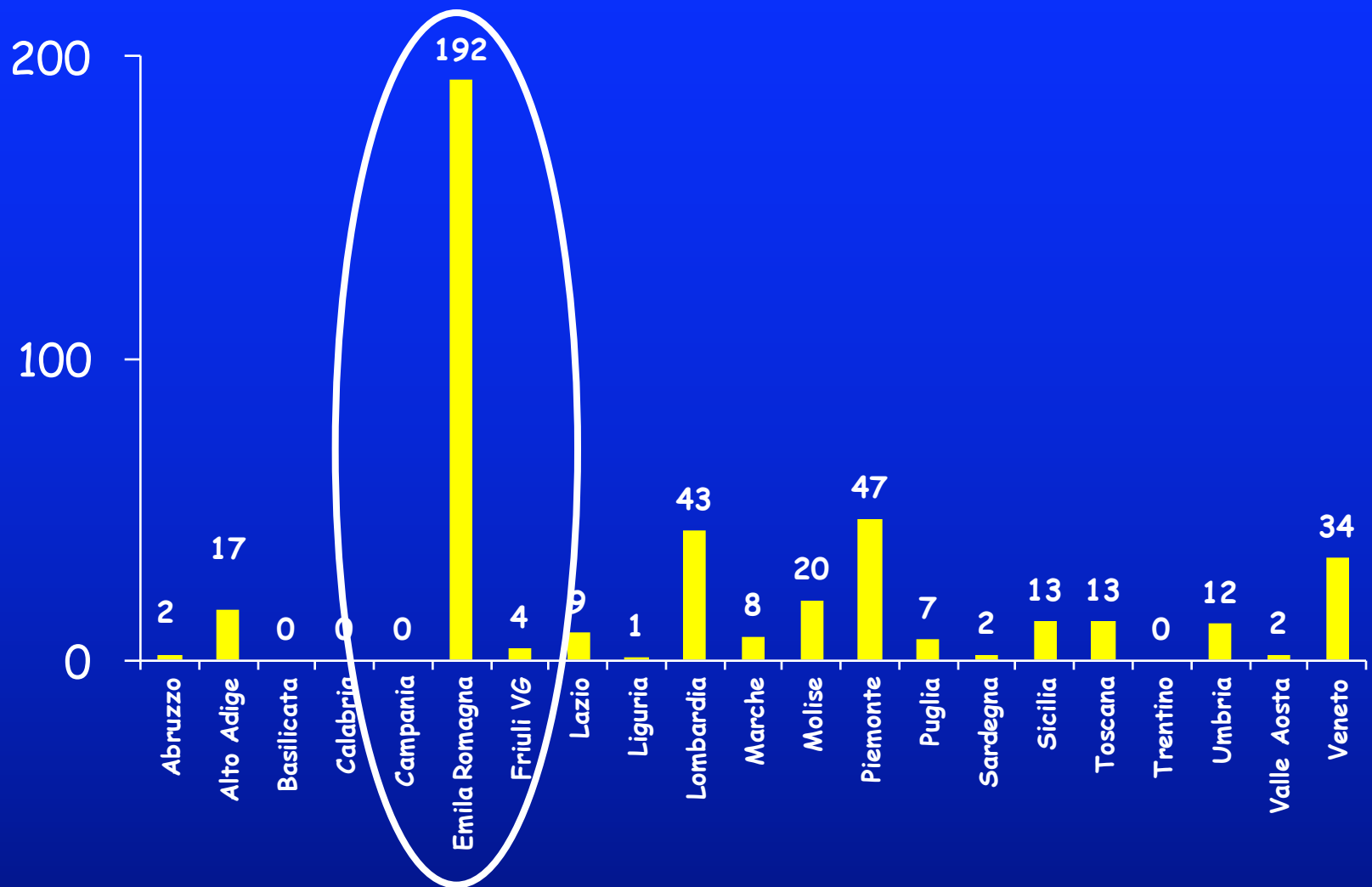




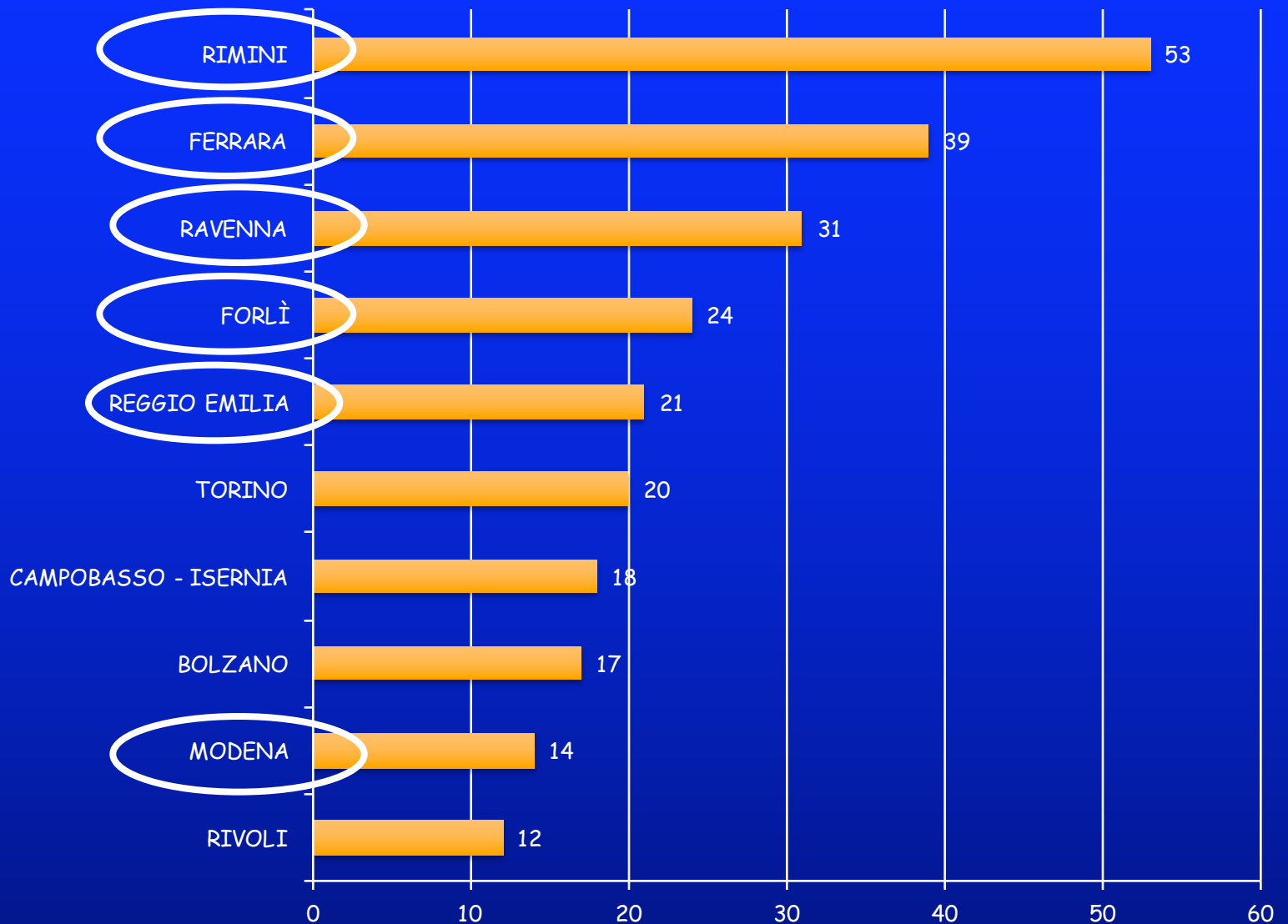
# Valvuloplastiche Italia 2013 vs 2014: Regioni >100 VAP



# Valvuloplastiche Italia 2014: Centri No TAVI

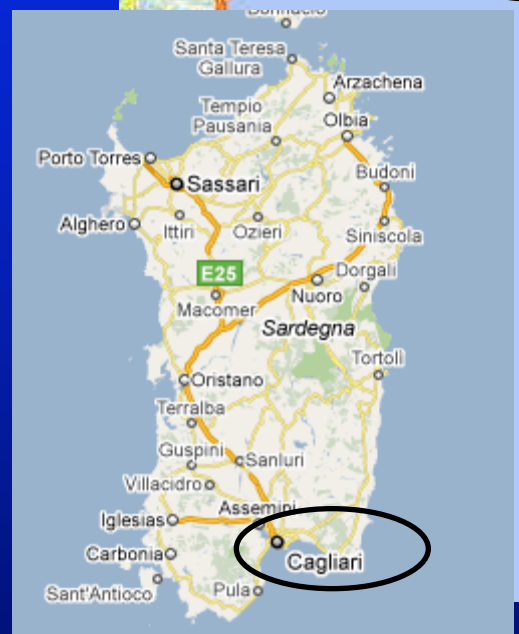


# Valvulopastiche Italia 2014: Centri No Tavi



# Rimini: Corsi Valvuloplastica

In 7 Anni più di 80 Cardiologi Interventisti da 50 Centri





CAMPANIA SICI-GISE 2016

Progetto "BAV for LIFE"

**Corso Teorico-Pratico di II livello  
per la gestione interventistica in Urgenza/Emergenza  
della Stenosi Aortica Critica:  
percorso multidisciplinare itinerante**

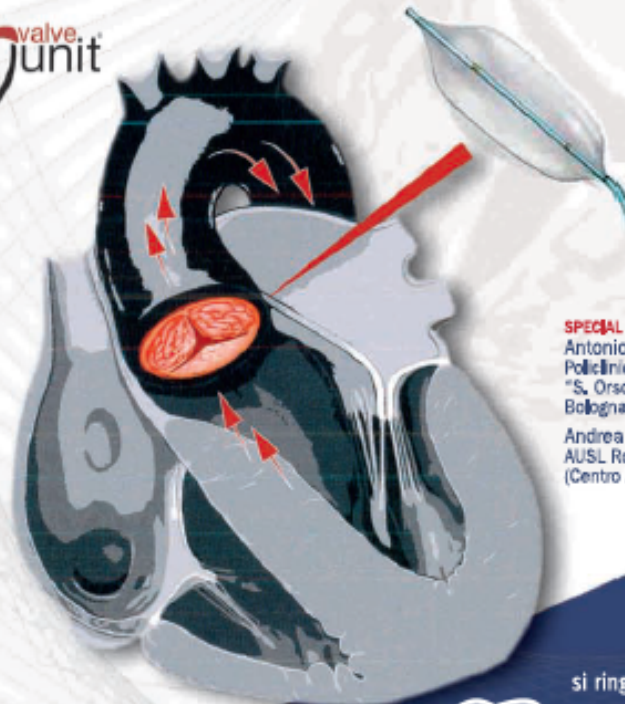
**OPENING DAY 24 Febbraio 2016**

*Sala Multimediale "Antonio Angrisani"*  
Polo Didattico Medicina e Chirurgia Università degli Studi di Salerno  
c/o A.O.U. S. Giovanni di Dio e Ruggi d'Aragona - Salerno

**COORDINATORE DEL CORSO** Tiziana Attisano



con il patrocinio di



**SPECIAL GUESTS**

**Antonio Marzocchi**  
Policlinico  
"S. Orsola-Malpighi"  
Bologna (Centro A.V. HUB)

**Andrea Santarelli**  
AUSL Romagna Rimini  
(Centro A.V. SPOKE)

si ringrazia