



Universidad de Oviedo

Congreso de la **SAC24**
Sociedad Asturiana
de **Cardiología** **17 y 18 de mayo**



Reparación transcatóter borde a borde mitral y tricúspide

Llanes, 18 de Mayo de 2024

Isaac Pascual MD, PhD, MSc, FESC.

Structural Transcatheter Heart Interventions.

Hospital Universitario Central de Asturias.

Associate Professor. University of Oviedo. Spain.

ipascua@live.com

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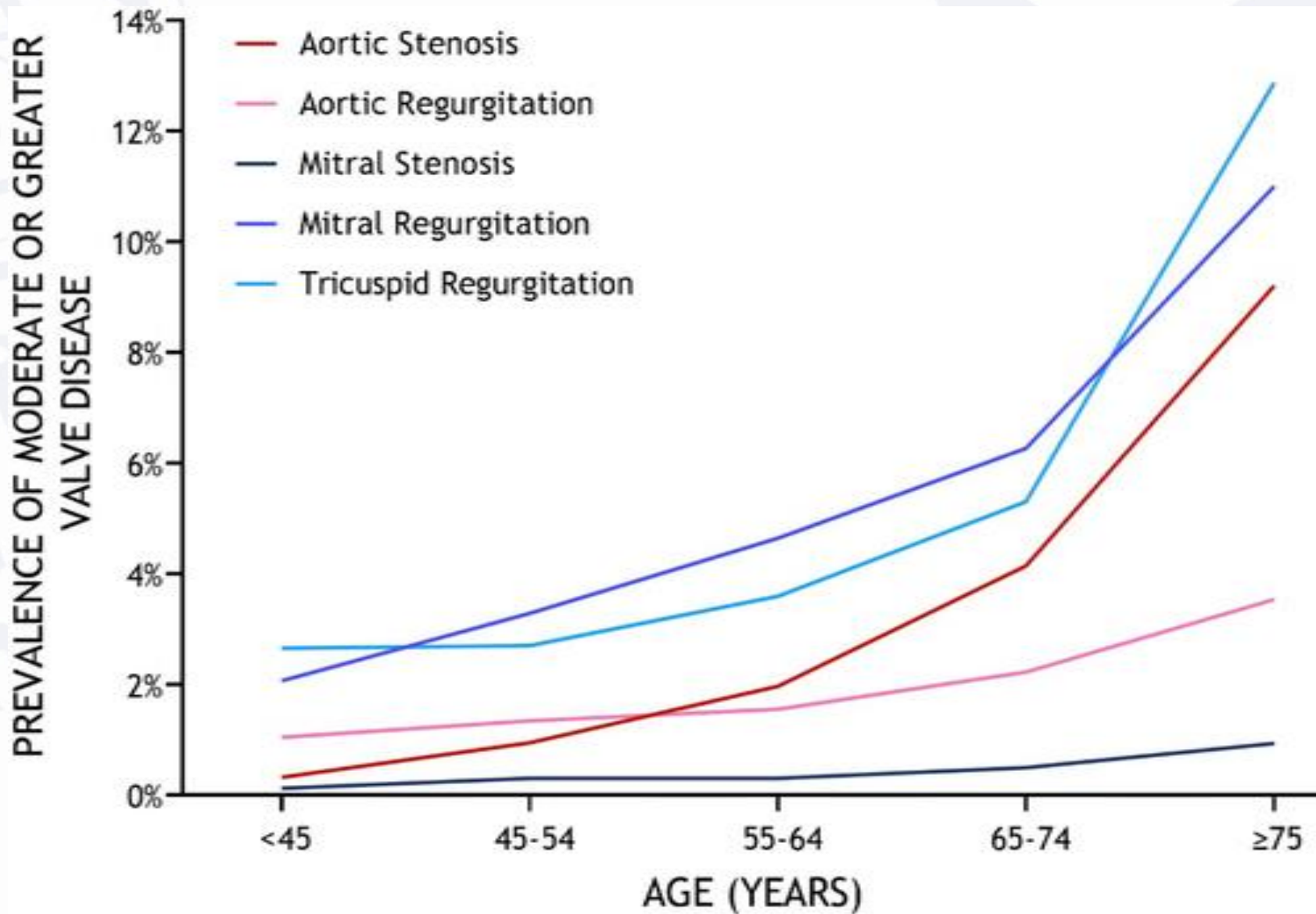
or

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1

Introduction

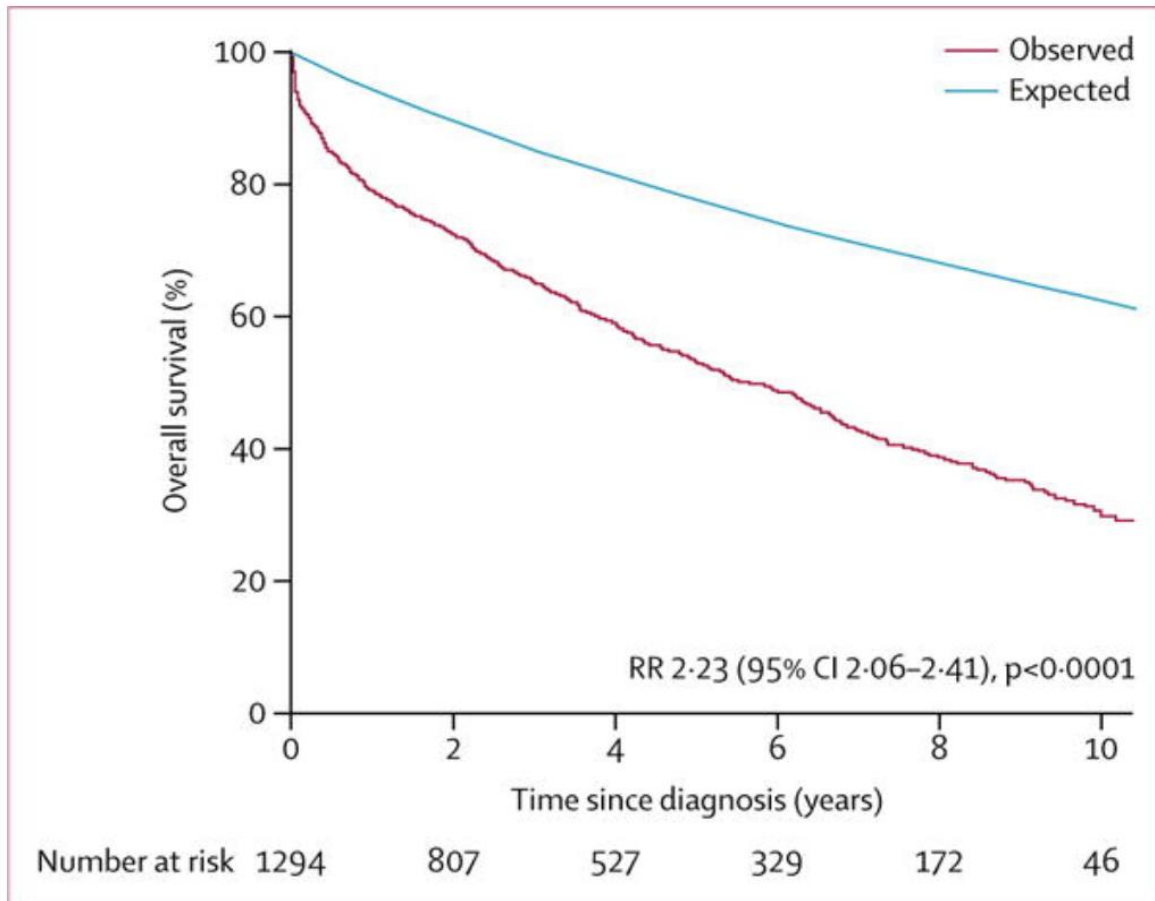
Moderate/severe MR and TR prevalence



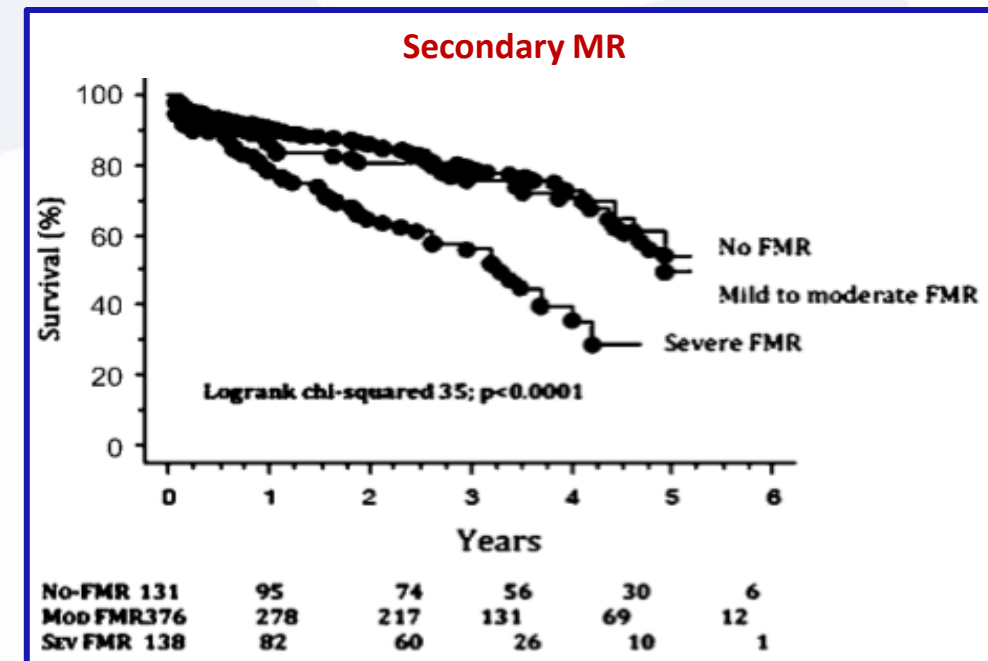
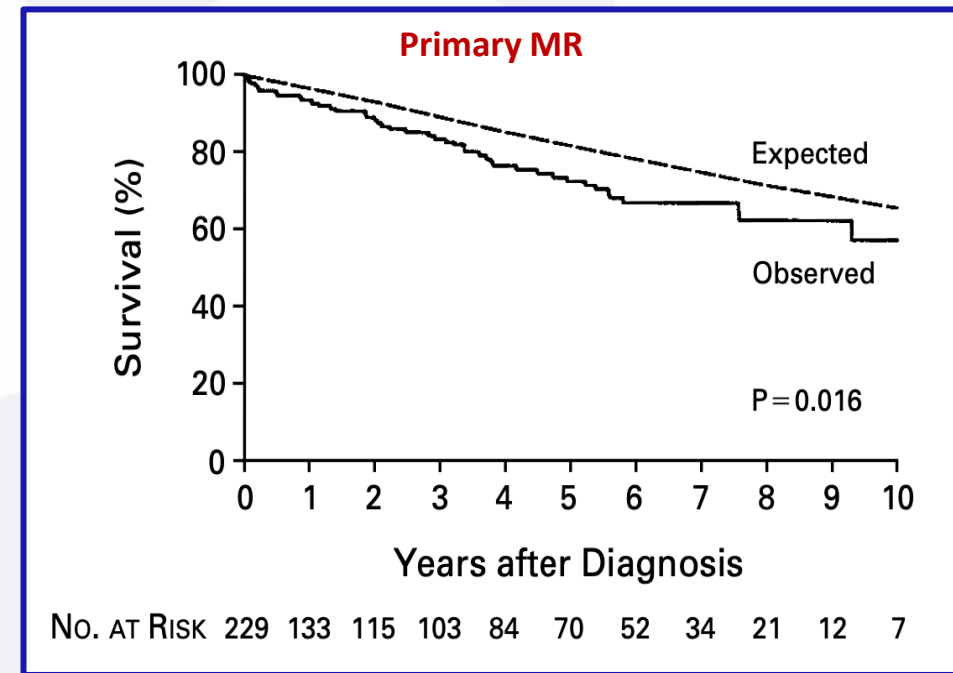
Isolated MR

Outcome and undertreatment of mitral regurgitation: a community cohort study

Volha Dziadzko, Marie-Annick Clavel, Mikhail Dziadzko, Jose R Medina-Inojosa, Hector Michelena, Joseph Maalouf, Vuyisile Nkomo, Prabin Thapa, Maurice Enriquez-Sarano



Dziadzko V, Lancet 2018.

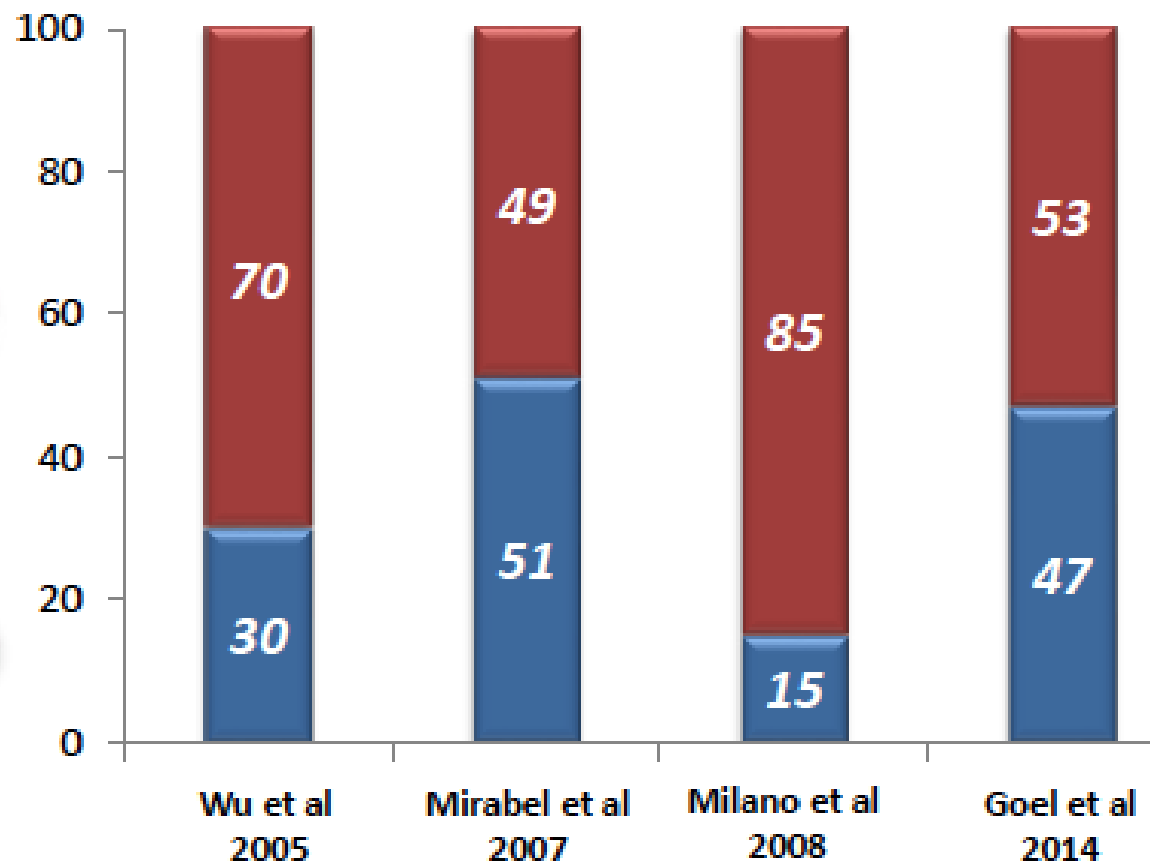


Tribouilloy C, J Am Coll Cardiol 2009.

Barbieri A, Eur Heart J 2011.

Patients with MR are undertreated

Proportion of patients with severe MR receiving surgical or medical treatment



- **Elderly**
- **Co-morbidities**
- **LV dysfunction**
- **Limited acces to high volumen centres.**

Moderate or Severe MR in the Community

OMR 32%

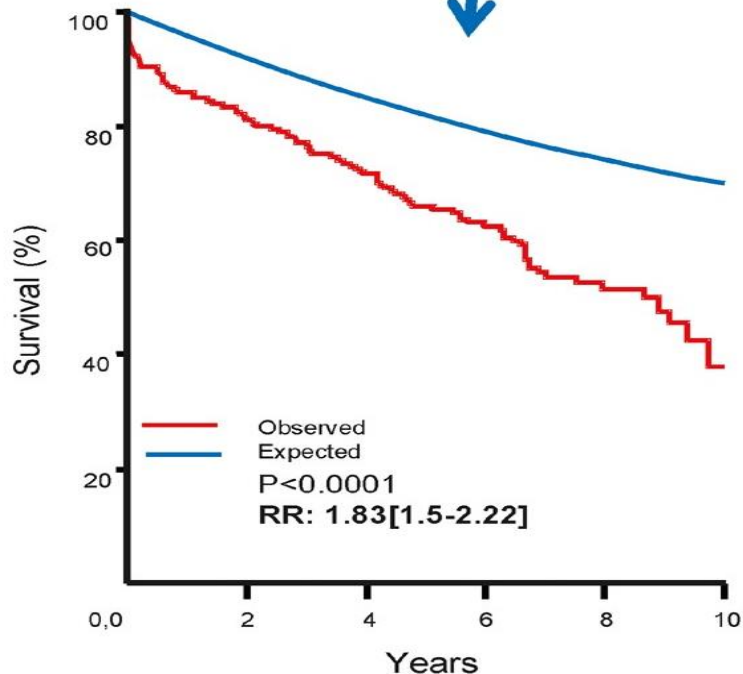
FMR 65%

Mixed 2%

OMR: 32%

Age 68, male 51%, Degenerative 72%
EF 61%, LV 51 mm, RVol 51 mL

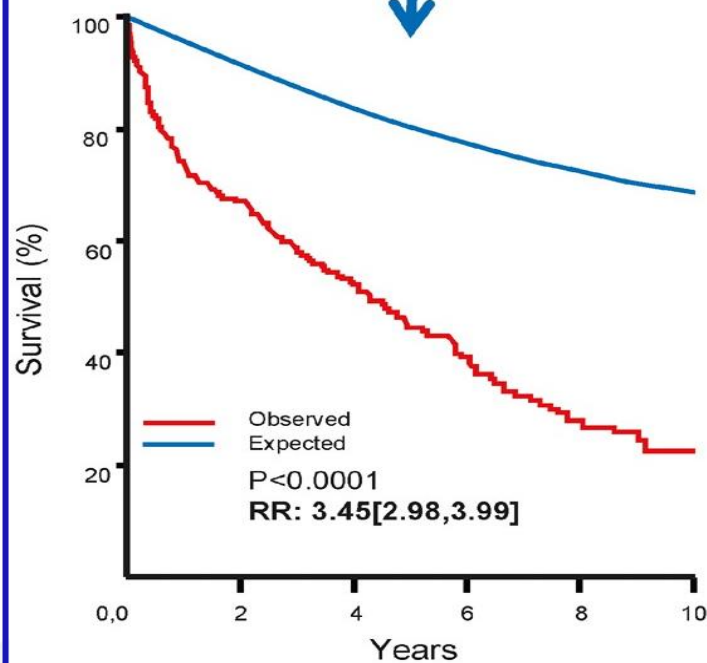
**Mitral Surgery
In lifetime: 37%**



FMR-v (LV remodeling): 38%

Age 73, male 59%, ischemic 62%
EF 33%, LV 59 mm, RVol 38 mL

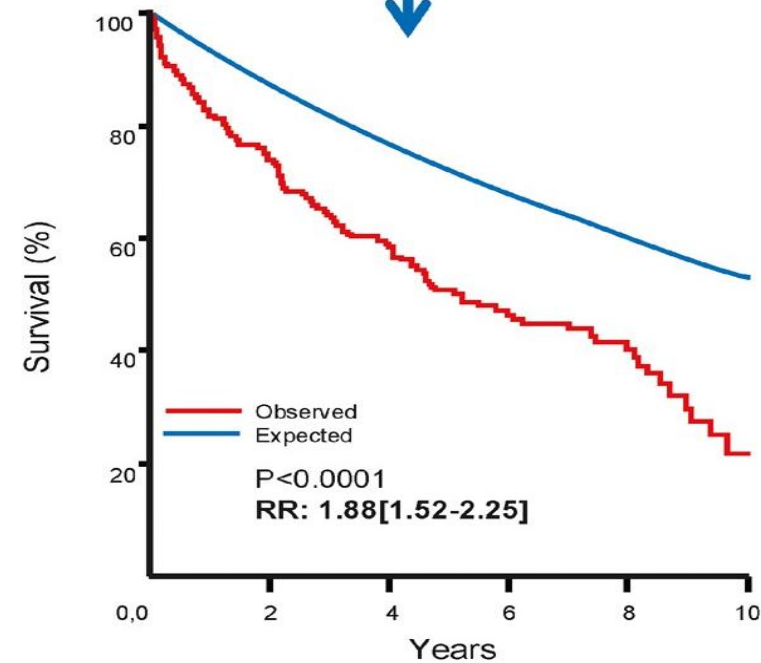
**Mitral Surgery
In lifetime: 4%**



FMR-a (LA remodeling) : 27%

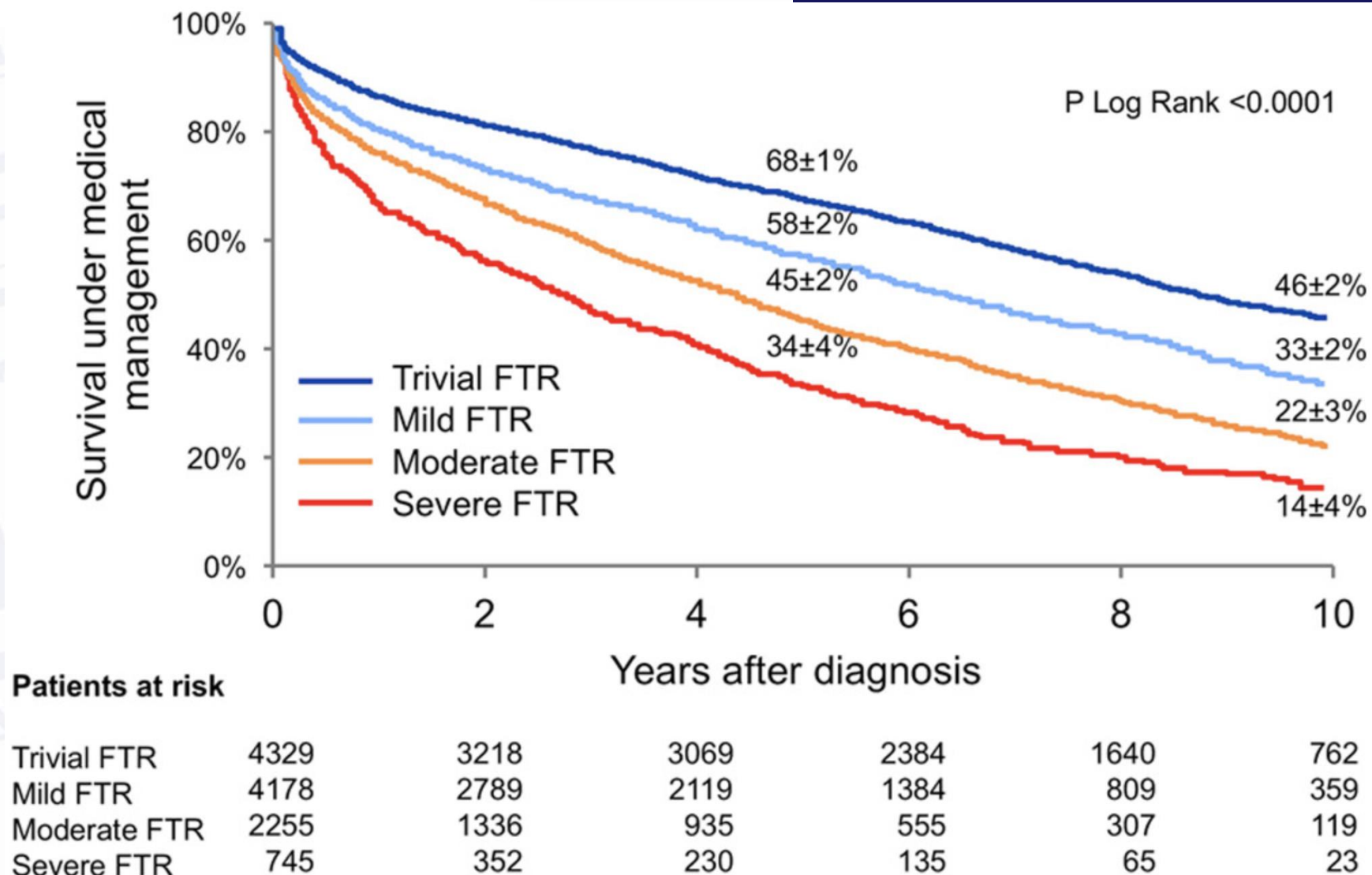
Age 80, male 33%, AF 57%
EF 57%, LV 48 mm, RVol 37 mL

**Mitral Surgery
In lifetime: 3%**



Excess Mortality Associated With Functional Tricuspid Regurgitation Complicating Heart Failure With Reduced Ejection Fraction

Bad prognosis of TR

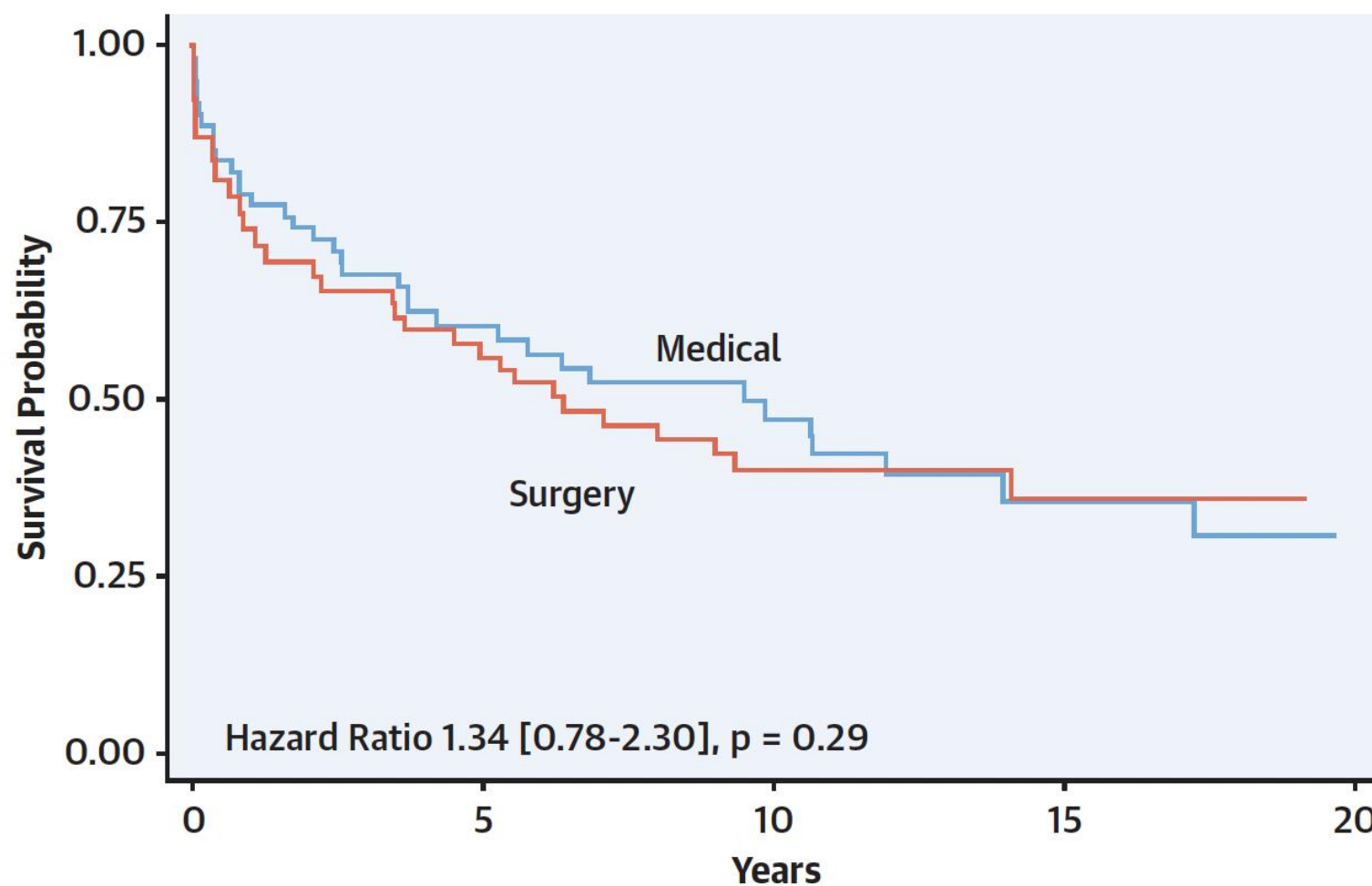


Surgery Does Not Improve Survival in Patients With Isolated Severe Tricuspid Regurgitation



Andrea L. Axtell, MD, MPH,^{a,b} Vijeta Bhambhani, MS, MPH,^c Philicia Moonsamy, MD,^{a,d} Emma W. Healy, BS,^c
Michael H. Picard, MD,^c Thoralf M. Sundt III, MD,^a Jason H. Wasfy, MD, MPhL^c

CENTRAL ILLUSTRATION Surgery Versus Medical Therapy for Severe Tricuspid Regurgitation

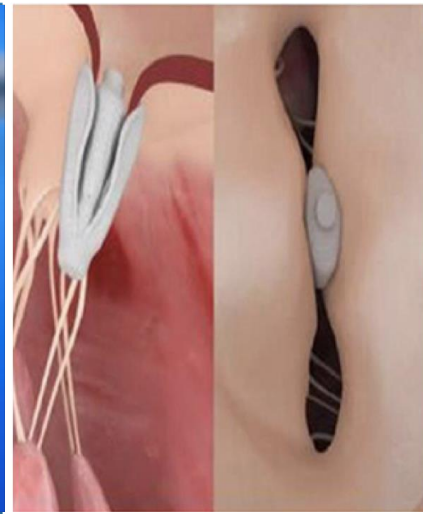


Transcatheter AV valve Therapies

Edge-to-edge repair



Newer generation MitraClip

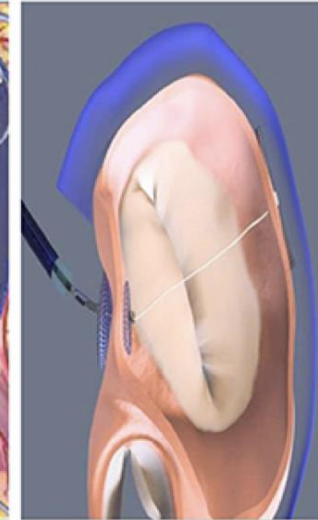


Pascal

Indirect annuloplasty



Carillon

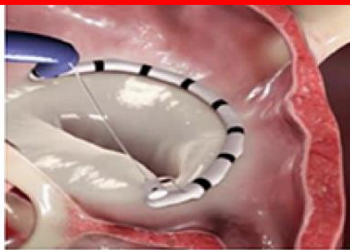


MVRx ARTO



Mitral Loop Cerclage

Direct annuloplasty



Cardioband



Mitralign

Chordal replacement



NeoChord

Transcatheter replacement



Sapien 3



Intrepid



CardiaQ



Tendyne



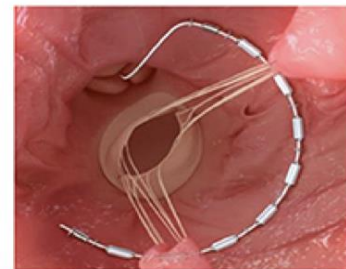
Tiara



Caisson



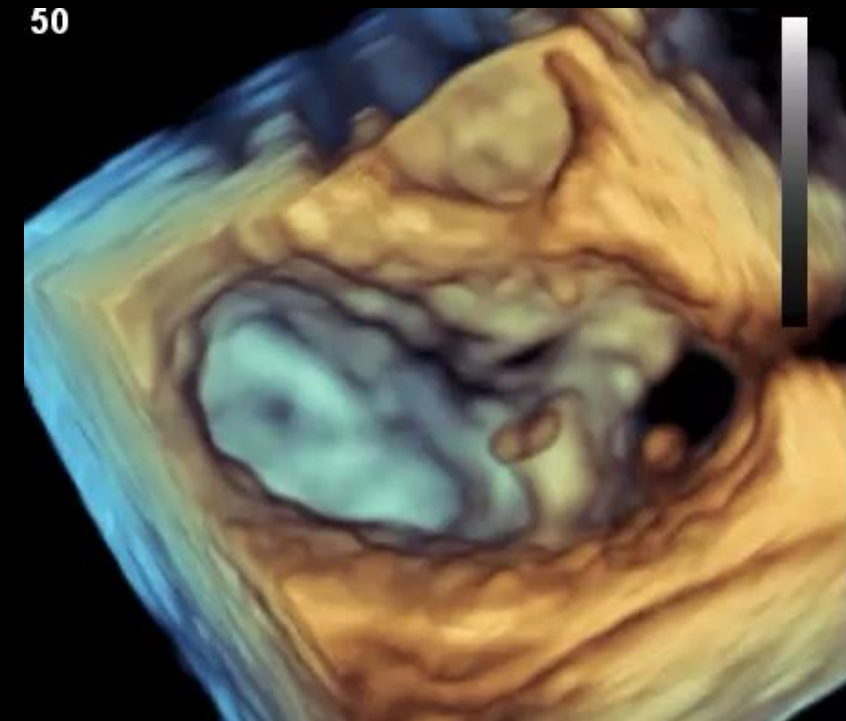
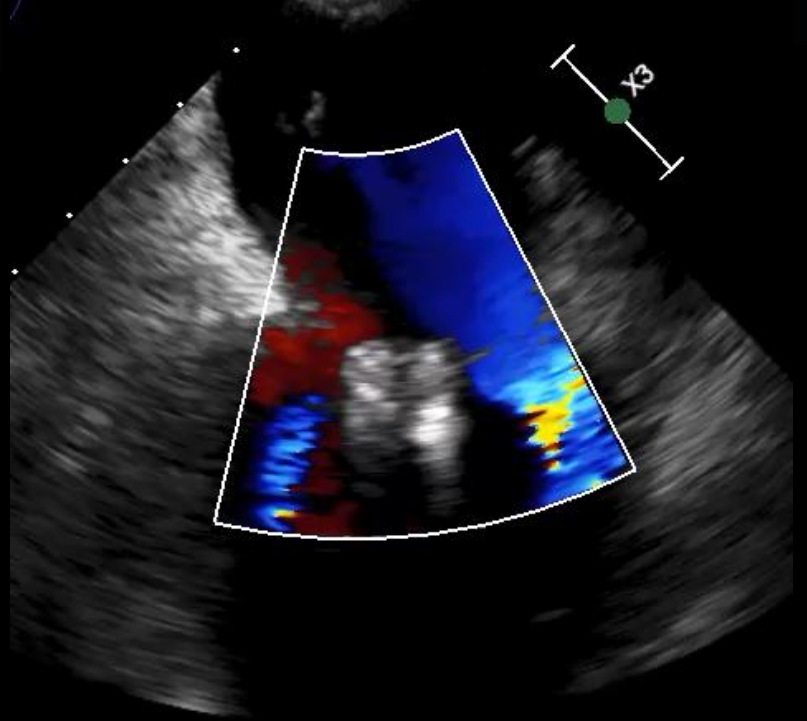
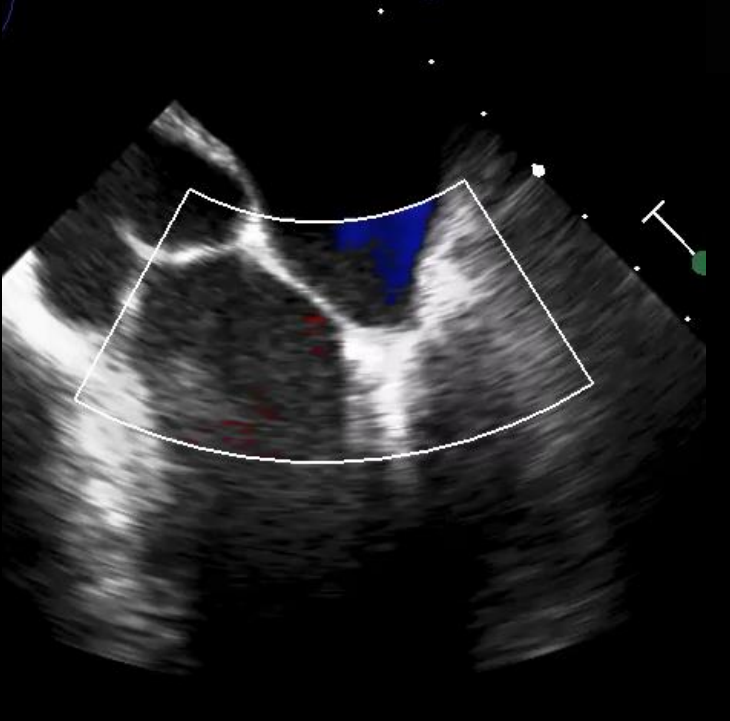
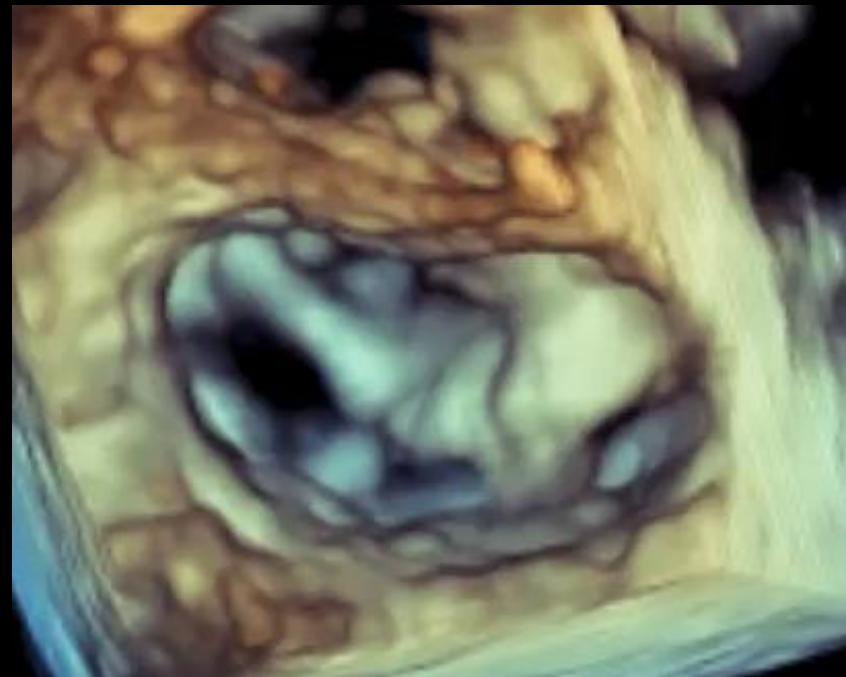
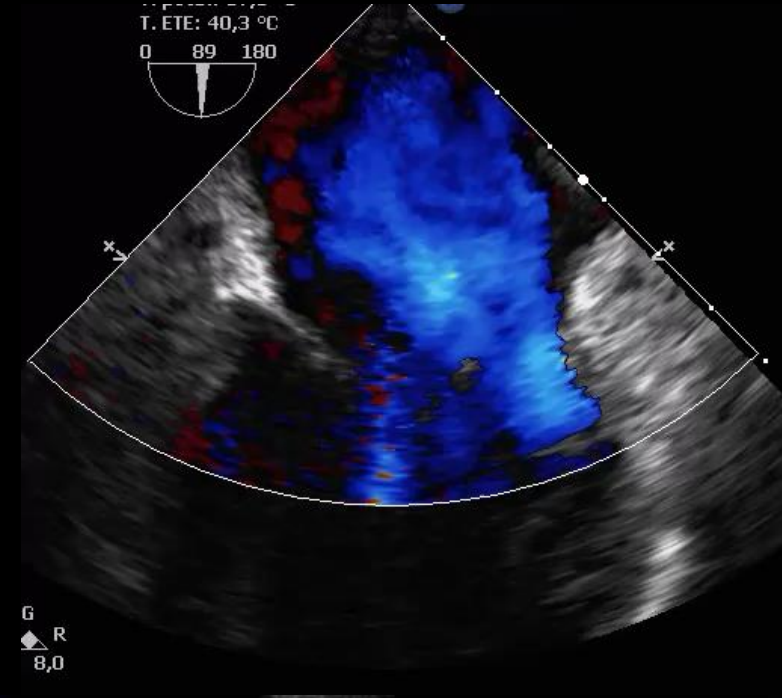
Millipede



Accucinch

2

DMR



Evidence in DMR

Randomized Comparison of Percutaneous Repair and Surgery for Mitral Regurgitation

5-Year Results of EVEREST II

OBJECTIVE

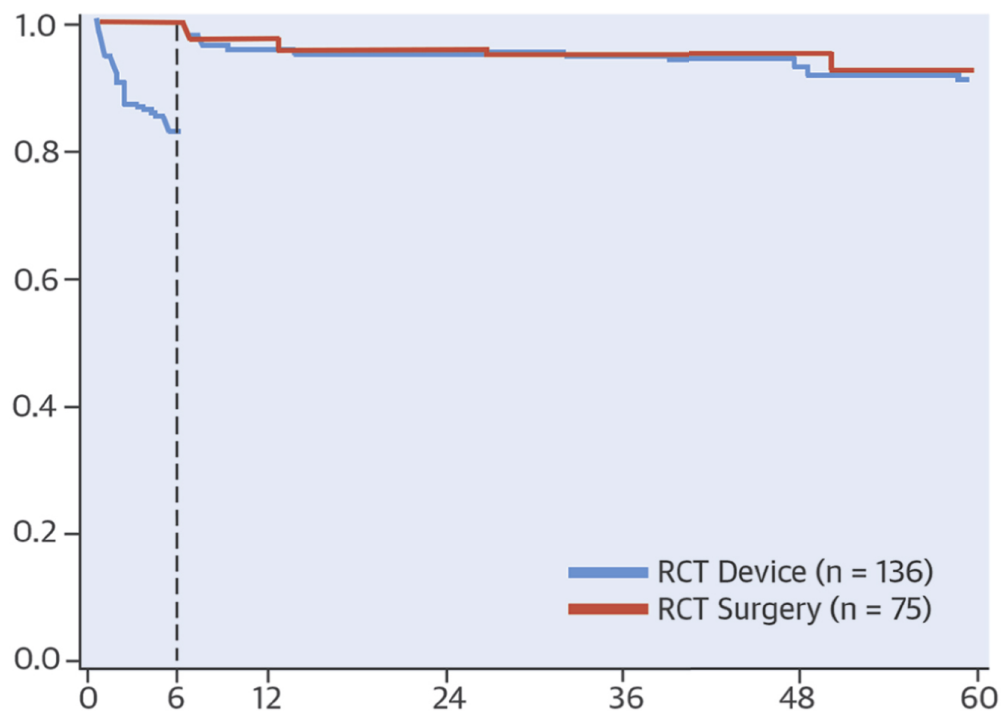
Final 5-year clinical outcomes and durability of TEER MV repair with MitraClip device compared with MV surgery.

TABLE 1 Baseline Characteristics: All-Treated Cohort

	Percutaneous Repair	Surgery
MR etiology		
Functional	27.0 (48/178)	22.5 (18/80)
Degenerative	73.0 (130/178)	77.5 (62/80)
Degenerative with anterior/bileaflet flail/prolapse	32.6 (58/178)	27.5 (22/80)
Degenerative with posterior flail/prolapse	37.6 (67/178)	47.5 (38/80)
Degenerative with neither flail nor prolapse	2.8 (5/178)	2.5 (2/80)

Evidence in DMR

D. Landmark Analysis of Freedom From MV Surgery or Reoperation Beyond 6 Months

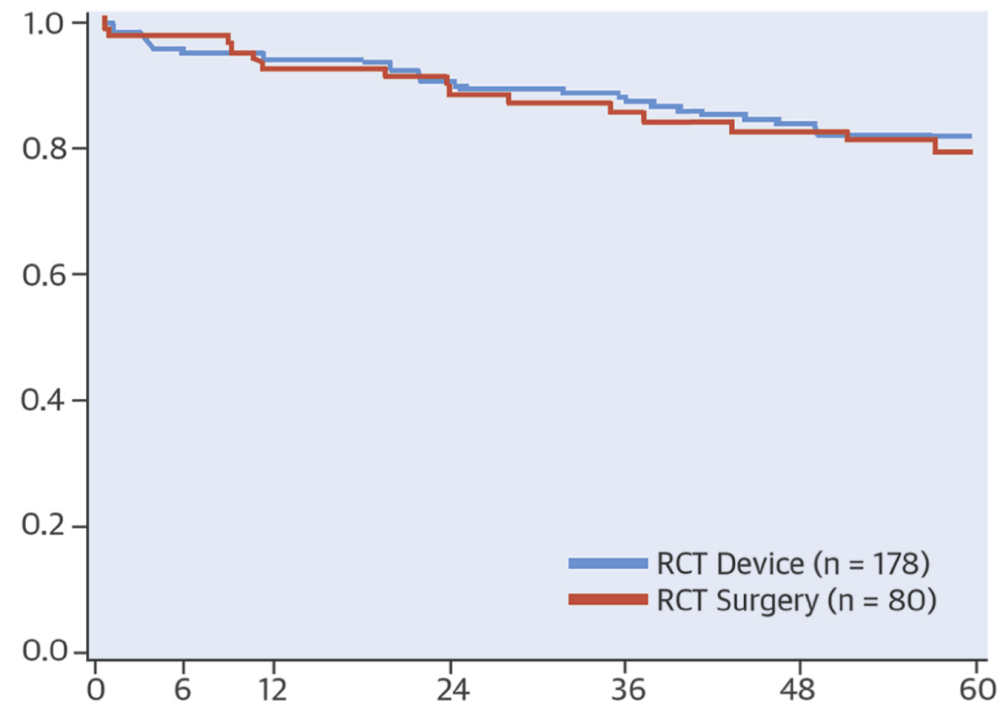


Patients At Risk

Months

Device Group	178	136	128	117	109	98	45
Control Group	80	75	69	63	54	49	21

B. Freedom From Death



Patients At Risk

Months

Device Group	178	165	158	143	133	119	58
Control Group	80	76	70	65	57	52	24

Transcatheter or surgical repair for degenerative mitral regurgitation in elderly patients: A propensity-weighted analysis

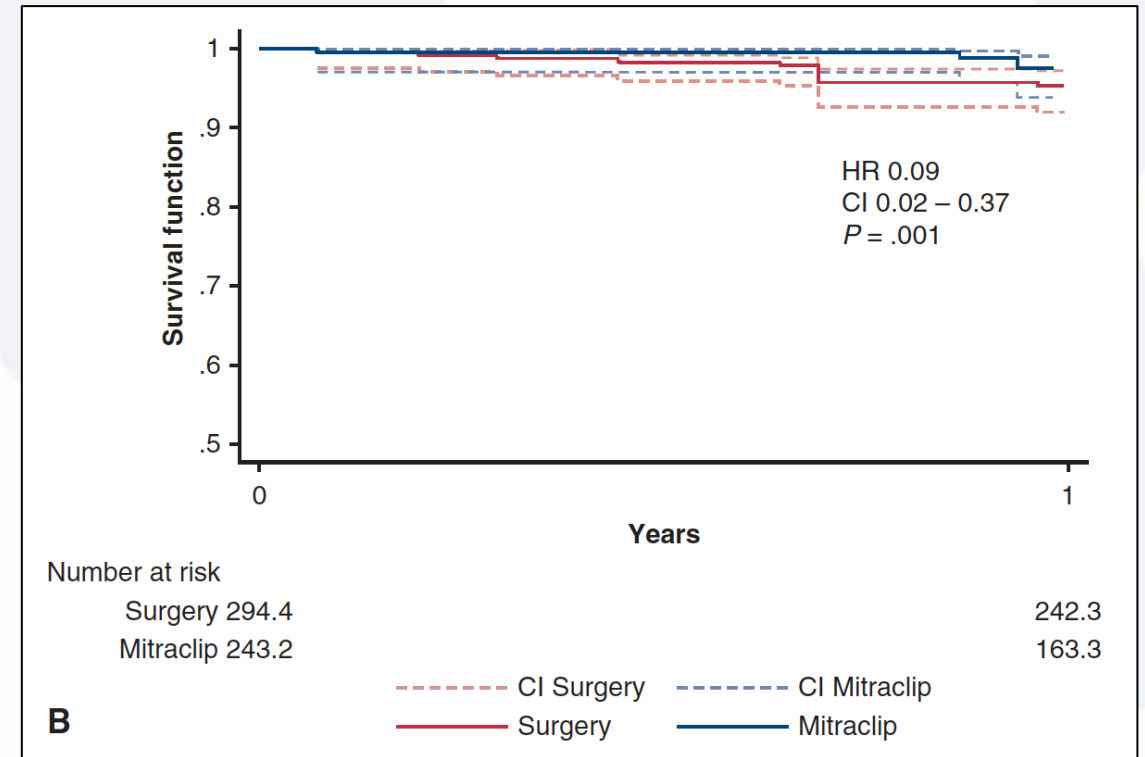


Nicola Buzzatti, MD,^a Mathias Van Hemelrijck, MD,^b Paolo Denti, MD,^a Stefania Ruggeri, MS,^a Davide Schiavi, BS,^a Iside Stella Scarfò, MD,^a Diana Reser, MD,^b Maurizio Taramasso, MD,^b Alberto Weber, MD,^b Giovanni La Canna, MD,^a Michele De Bonis, MD,^a Francesco Maisano, MD,^t Ottavio Alfieri, MD^a

STS Surgery 1.91 [1.43; 3.24]
MitraCip 2.48 [1.91; 3.49]

TABLE 4. Weighted Cox model for all-cause death

	HR	P value	95% CI
STS-PROM	1.18	<.001	1.12-1.24
MitraClip (t < 1 y)	0.09	.001	0.02-0.37
MR ≥3+ recurrence	2.19	.033	1.07-4.48

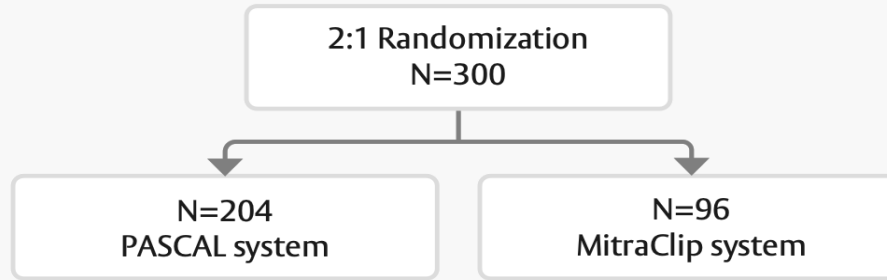


1-y Outcomes from the CLASP IID Randomized Trial for DMR

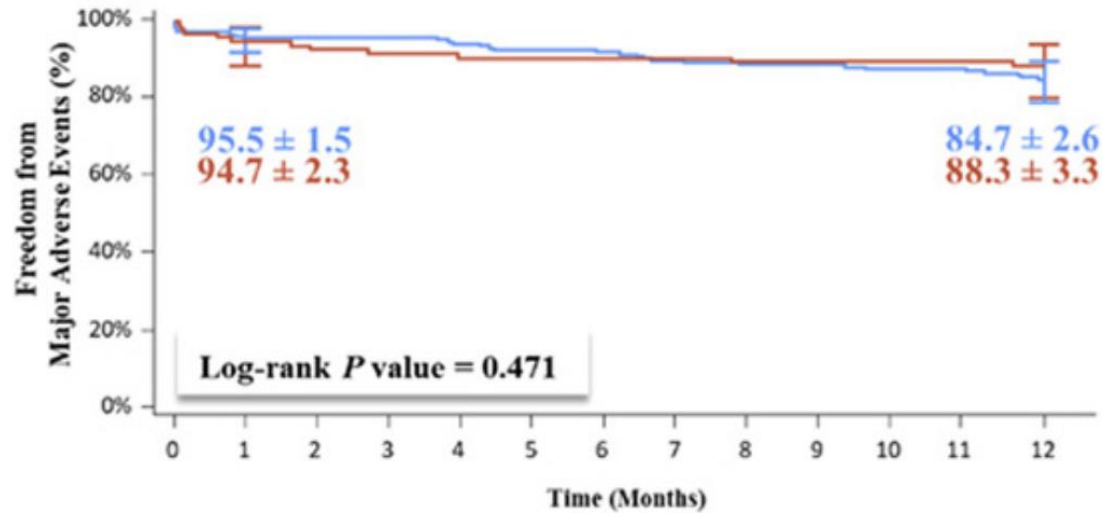
Patients who are symptomatic, have 3+ or 4+ degenerative mitral regurgitation (DMR) and are deemed prohibitive risk for surgery.



Powered for non-inferiority of the PASCAL system to the MitraClip system



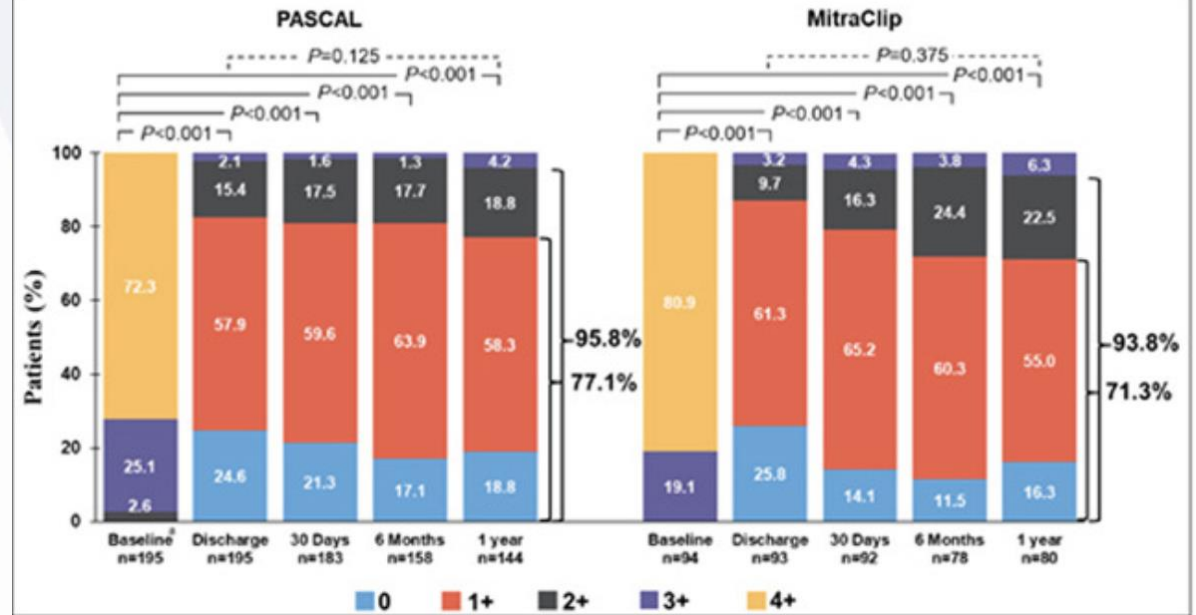
A. Major Adverse Events



No. at risk

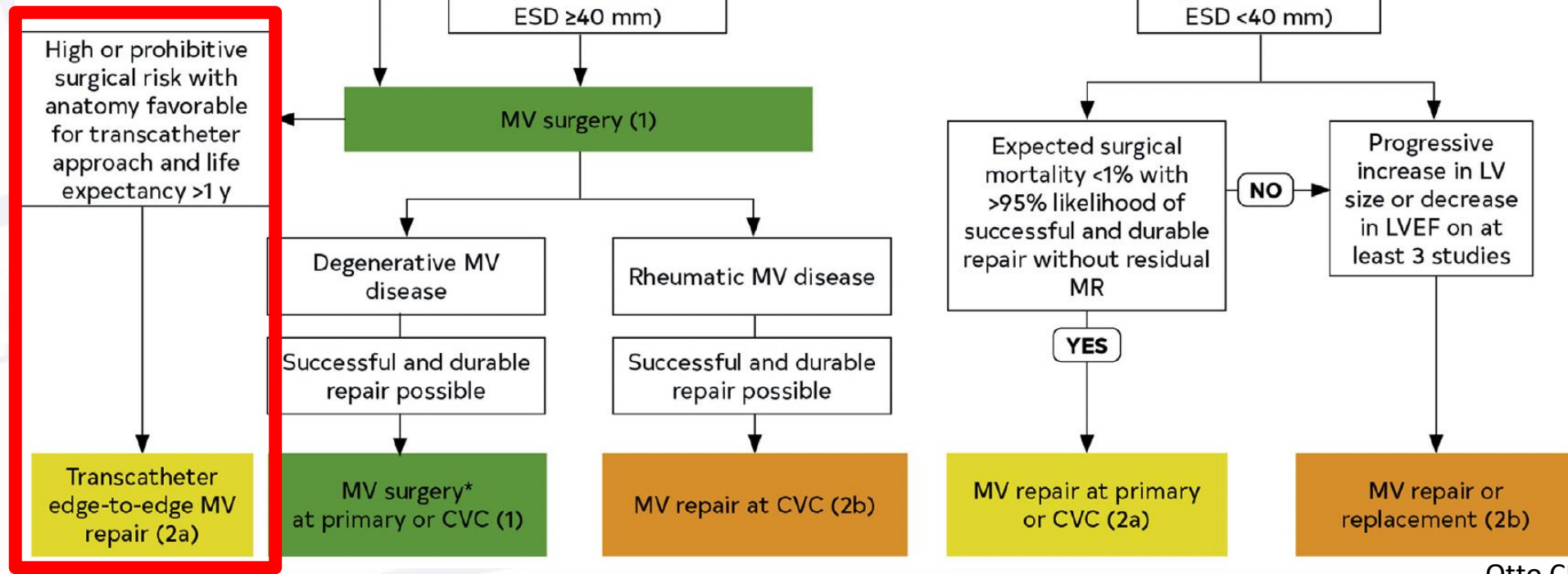
	0	1	2	3	4	5	6	7	8	9	10	11	12
PASCAL	199	186	185	184	179	176	172	167	165	163	160	160	153
MitraClip	95	88	86	85	84	84	84	84	83	83	83	83	82

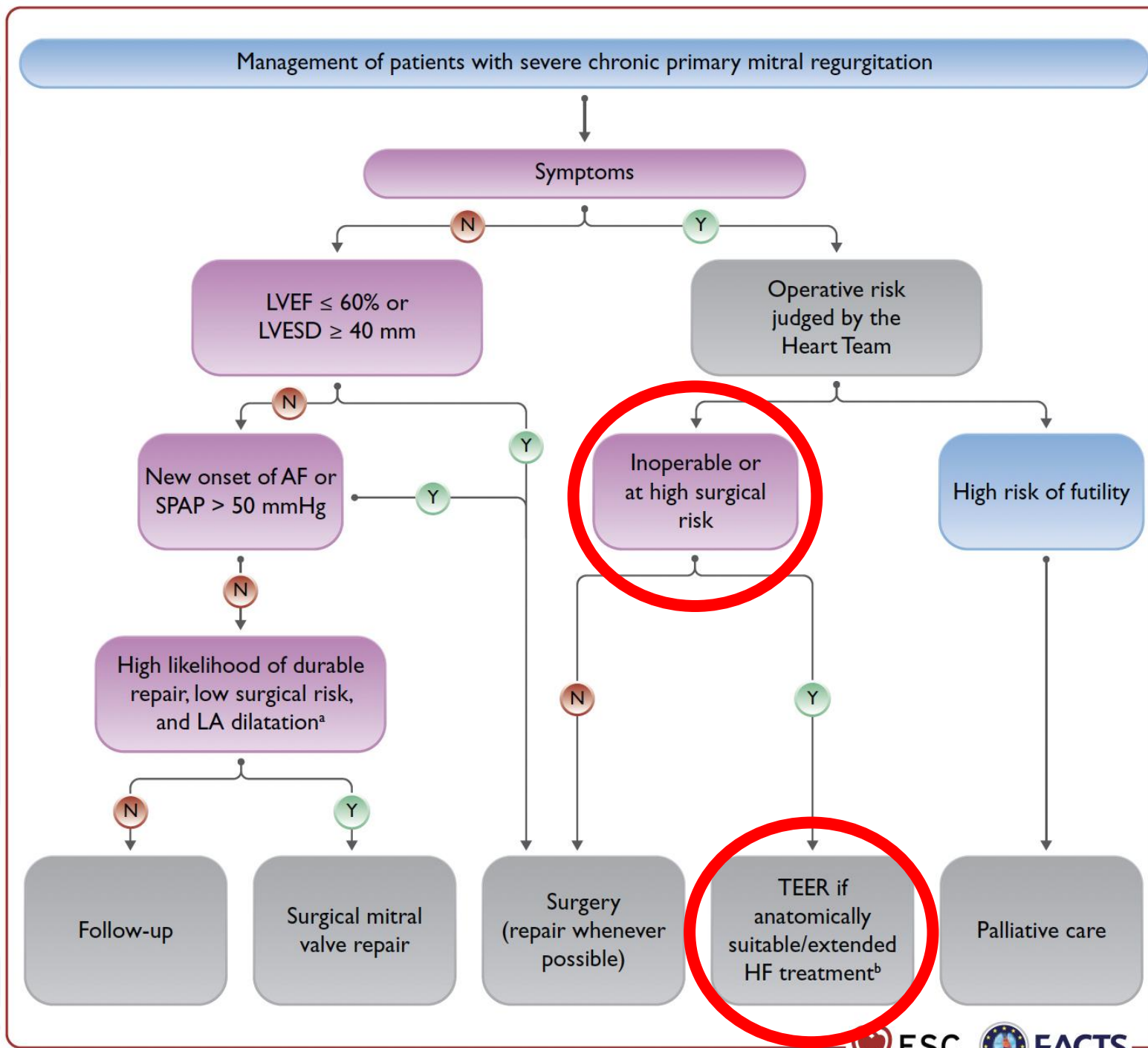
B. MR Reduction



2020 ACC/AHA Guideline for the Management of Patients With Valvular Heart Disease

2a





IIb

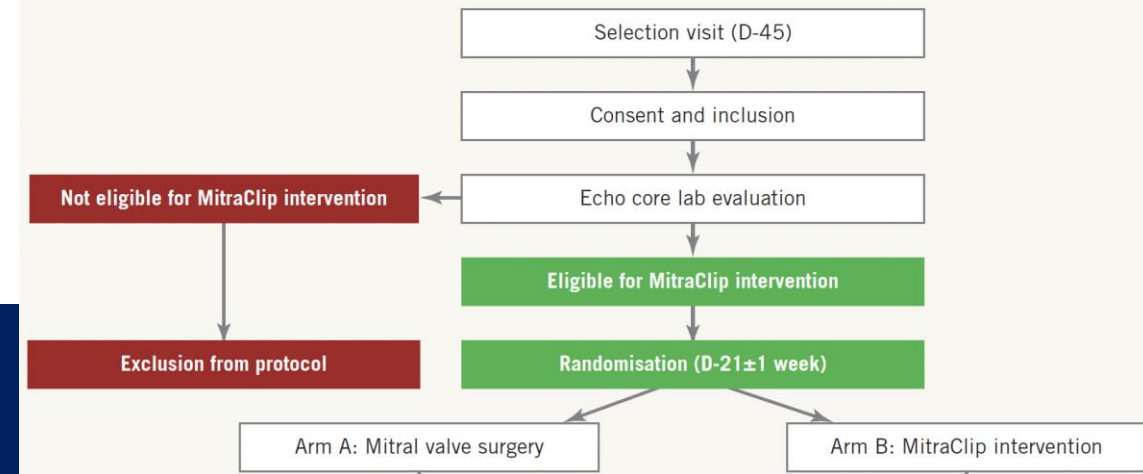


Universidad de Oviedo

Randomized Clinical Trials in DMR



The MITRA-HR study: design and rationale of a randomised study of MitraClip transcatheter mitral valve repair in patients with severe primary mitral regurgitation eligible for high-risk surgery



MitraClip REPAIR MR Study

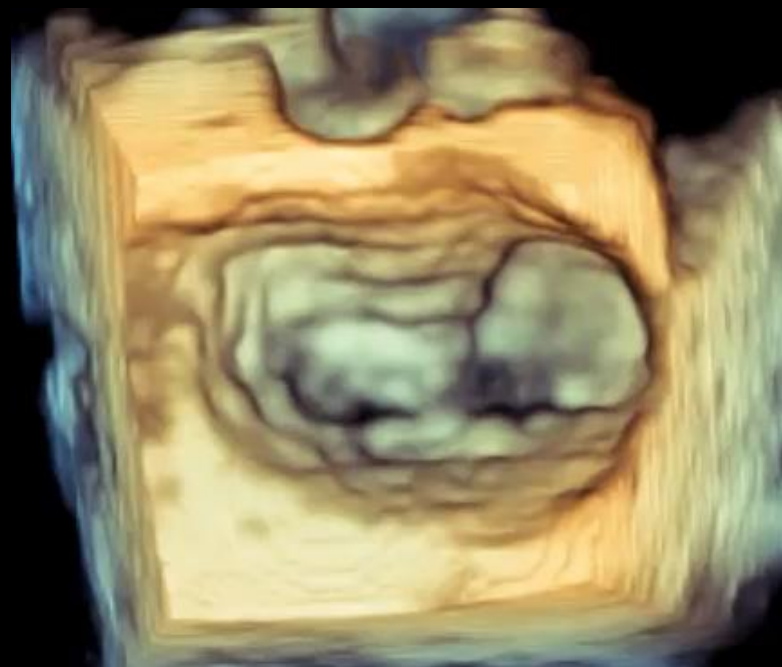
Percutaneous MitraClip Device or Surgical **Mitral Valve** REpair in PATients With PrImaRy **Mitral Regurgitation** Who Are Candidates for Surgery (REPAIR MR)

ClinicalTrials.gov ID  NCT04198870

- Objective: to compare the clinical outcome of **MitraClip™** versus **surgical repair** in patients with **severe primary MR** who are at moderate surgical risk

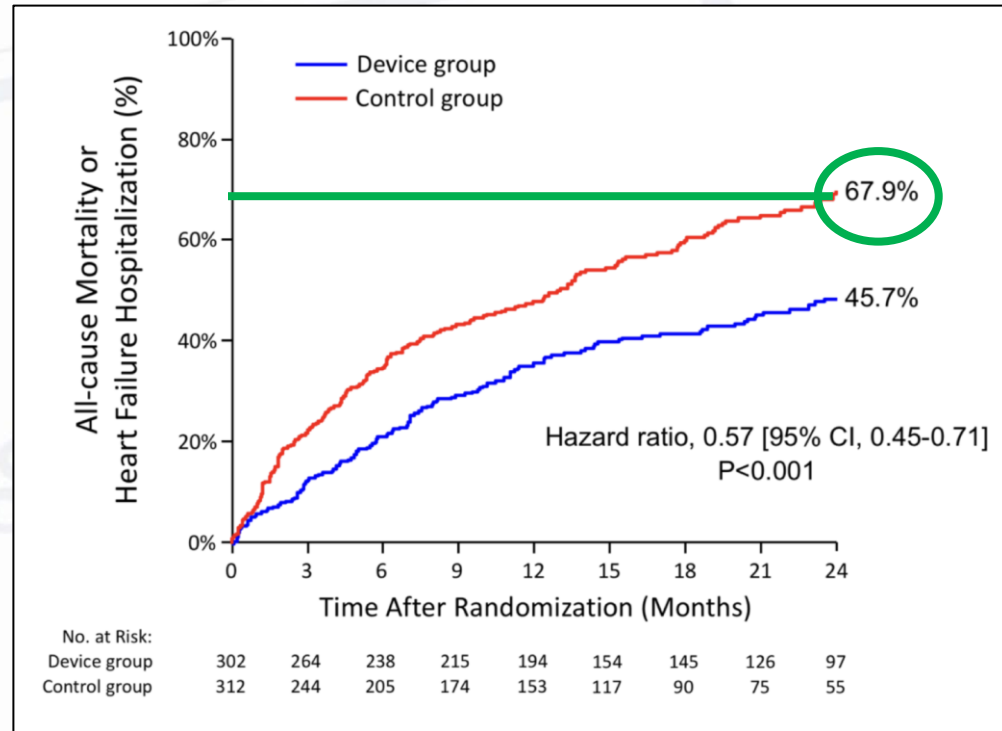
3

FMR

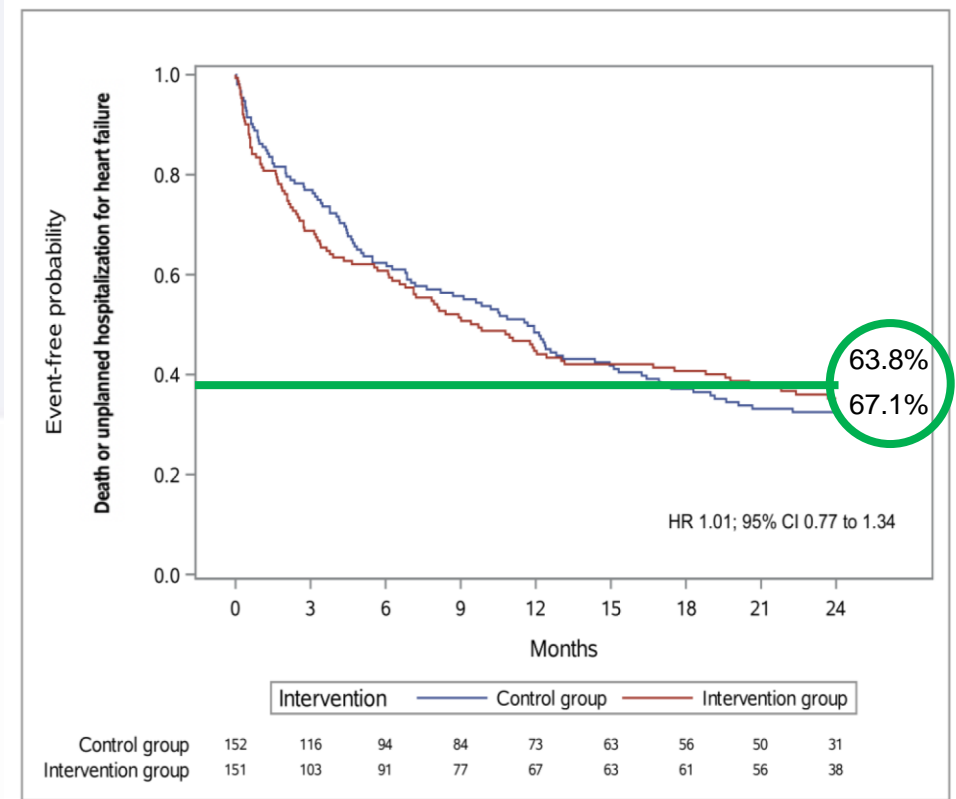


Evidence in FMR

COAPT



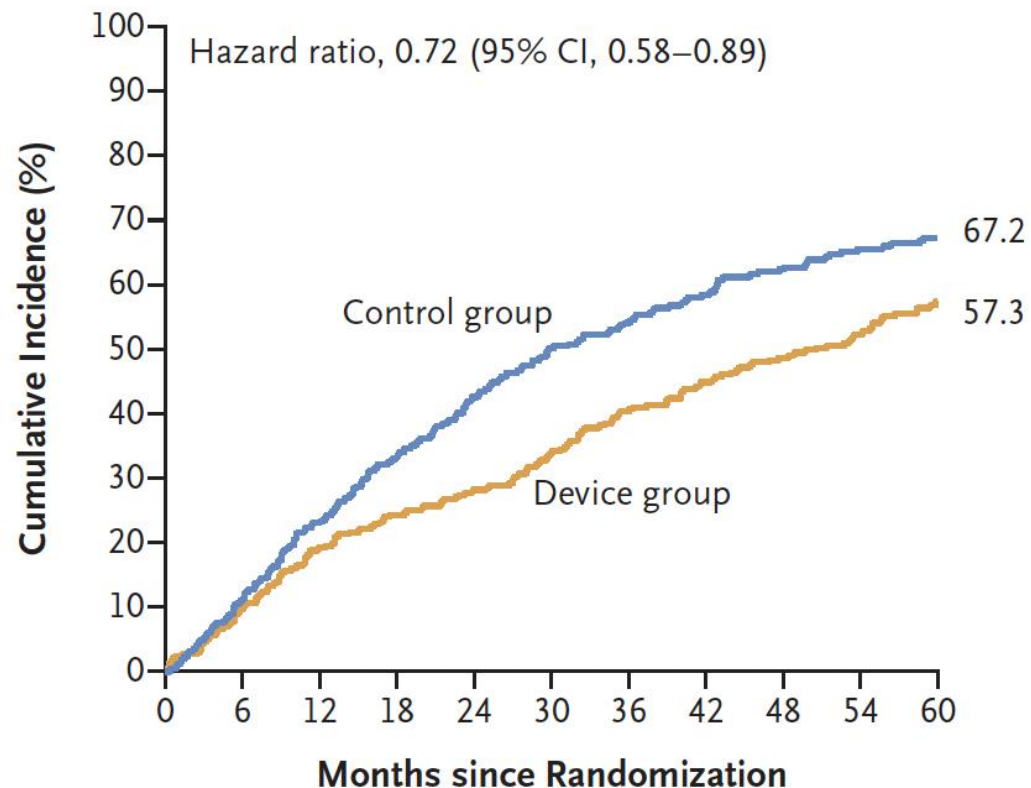
2y MITRA-FR





Five-Year Follow-up after Transcatheter Repair of Secondary Mitral Regurgitation

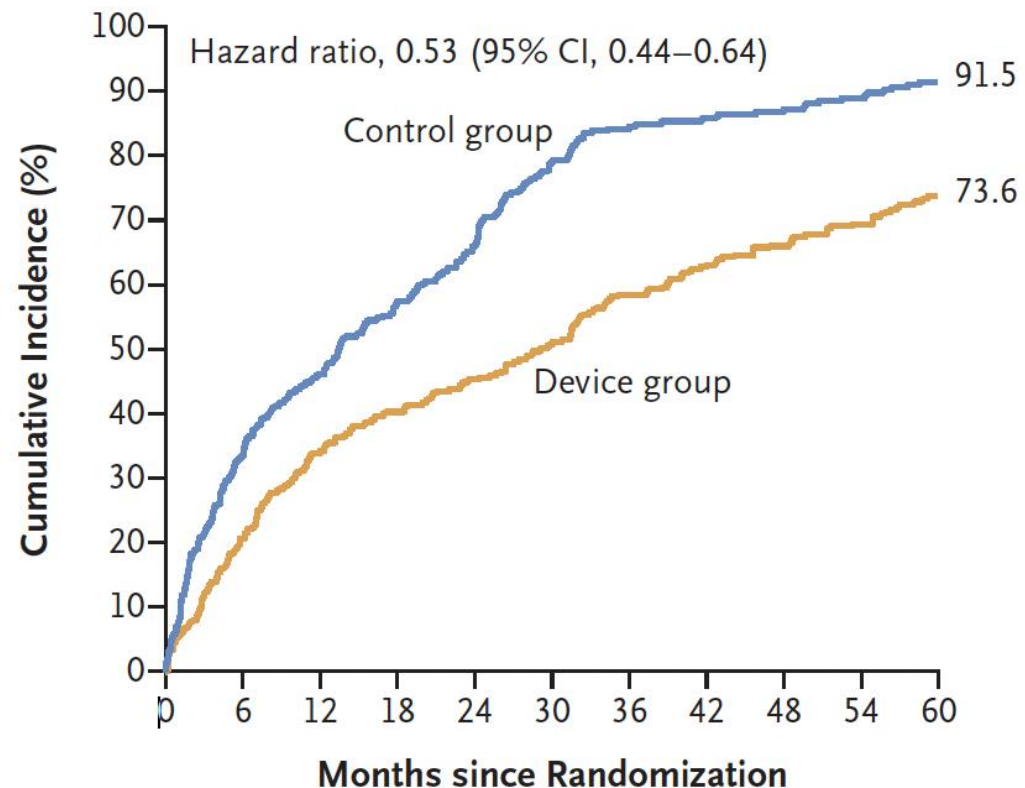
C Death from Any Cause



No. at Risk

Control group	312	272	224	189	157	135	122	107	94	84	59
Device group	302	269	238	219	205	186	167	151	138	124	79

D Death from Any Cause or First Hospitalization for Heart Failure



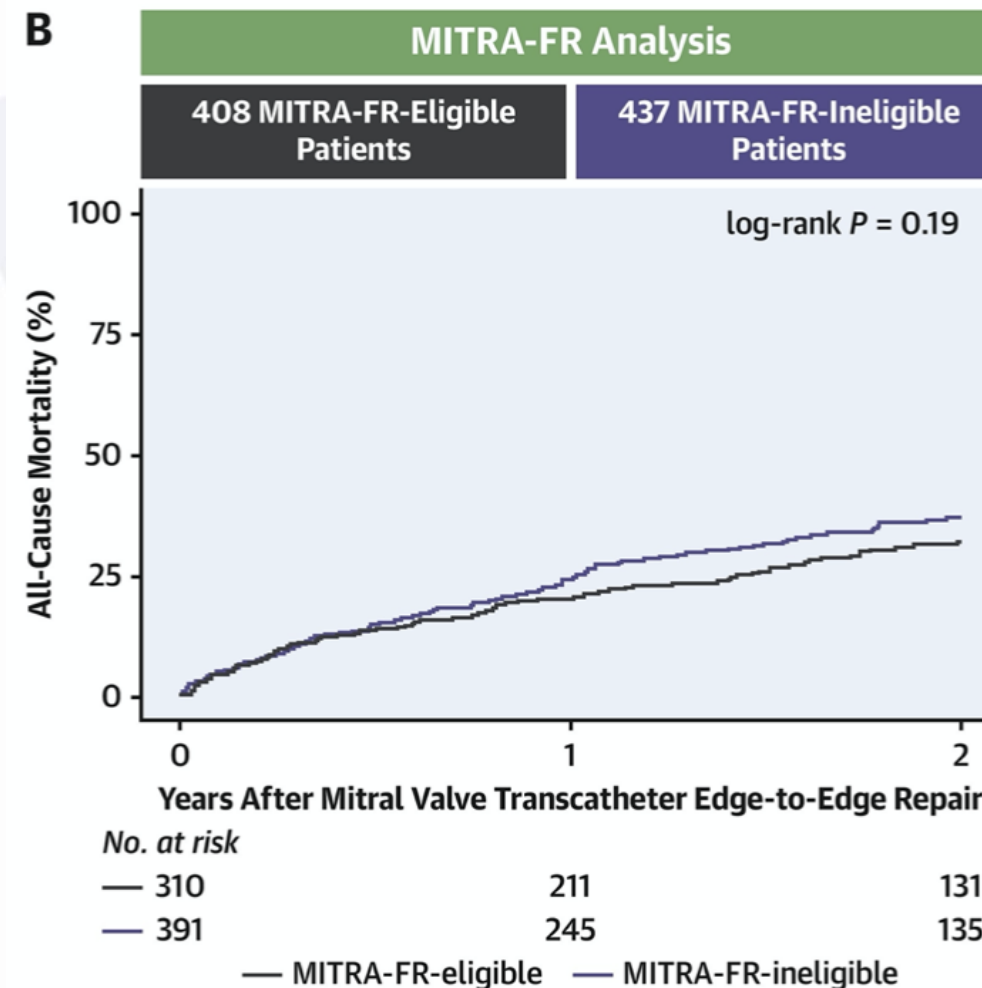
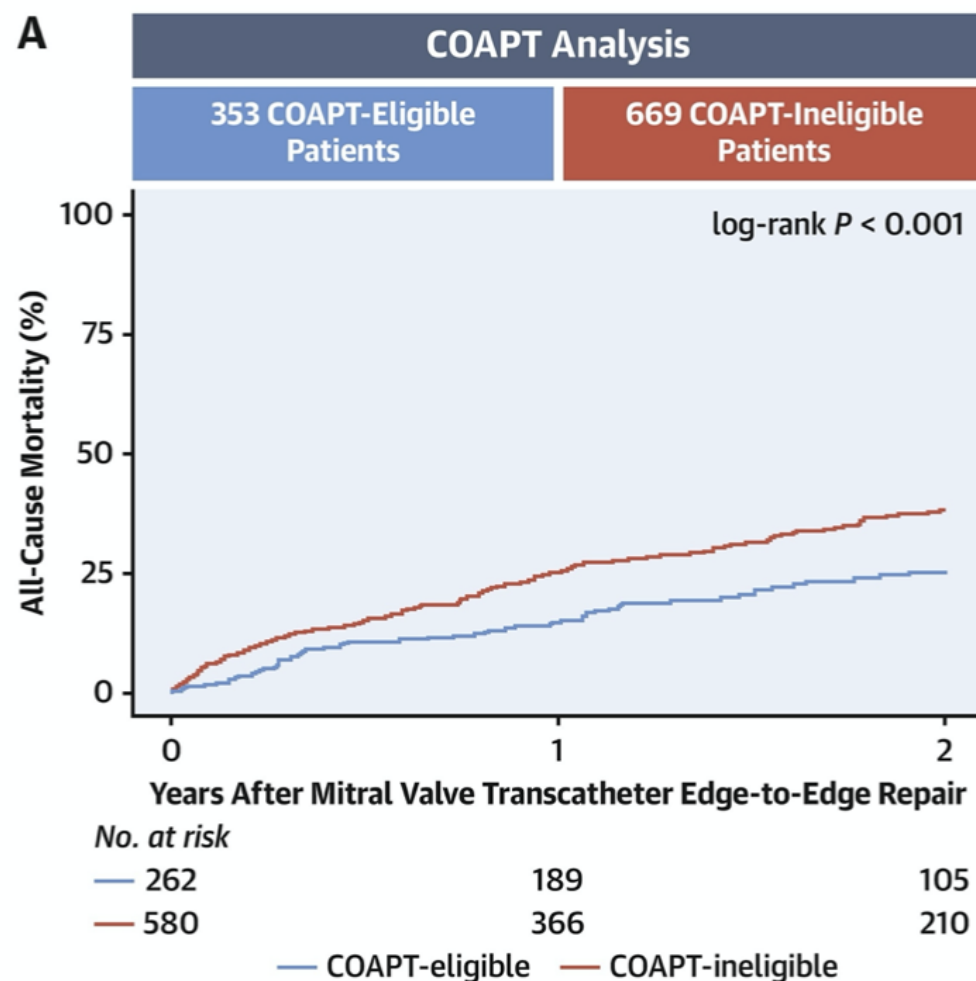
No. at Risk

Control group	312	206	157	122	95	58	43	37	33	26	17
Device group	302	236	194	174	158	141	118	105	93	81	52

Outcomes Stratified by Adapted Inclusion Criteria After Mitral Edge-to-Edge Repair

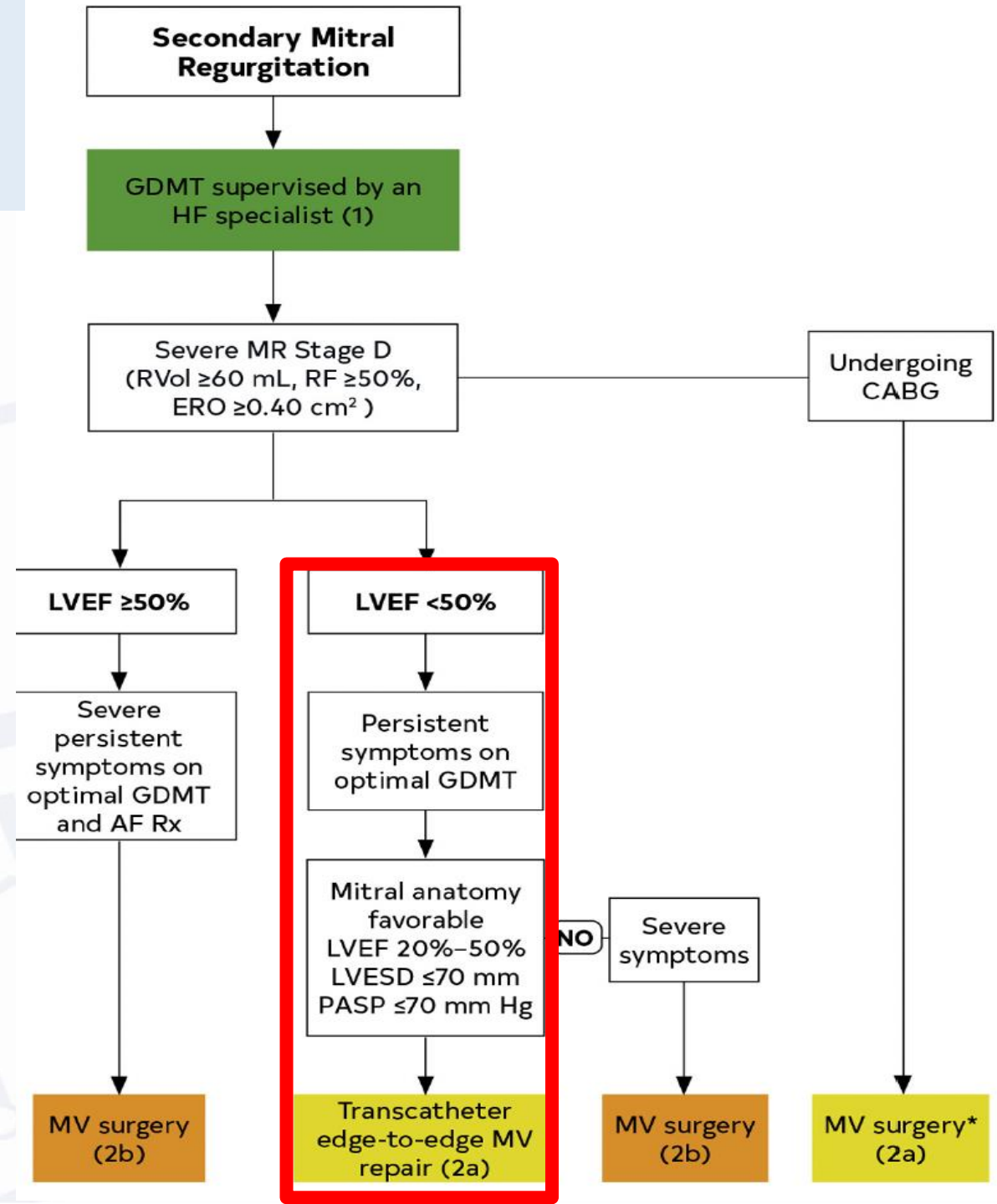
Benedikt Koell MD ^{a, b} , Mathias Orban MD ^c, Jessica Weimann MSc ^a, Mohammad Kassar MD ^d, Nicole Karam MD ^e, Michael Neuss MD ^f, Aniela Petrescu MD ^g, Christos Iliadis MD ^h, Matthias Unterhuber MD

1,022 patients included in the EuroSMR
(European Registry of Transcatheter Repair for SMR)



2020 ACC/AHA Guideline for the Management of Patients With Valvular Heart Disease

2a



2a

Patients without concomitant coronary artery or other cardiac disease requiring treatment

TEER should be considered in selected symptomatic patients, not eligible for surgery and fulfilling criteria suggesting an increased chance of responding to the treatment.^{337,338,356,357 e}

Ila

B

Patients with concomitant coronary artery or other cardiac disease requiring treatment

In symptomatic patients, who are judged not appropriate for surgery by the Heart Team on the basis of their individual characteristics,^d PCI (and/or TAVI) possibly followed by TEER (in case of persisting severe SMR) should be considered.

Ila

C

Guidelines

vs

real life?

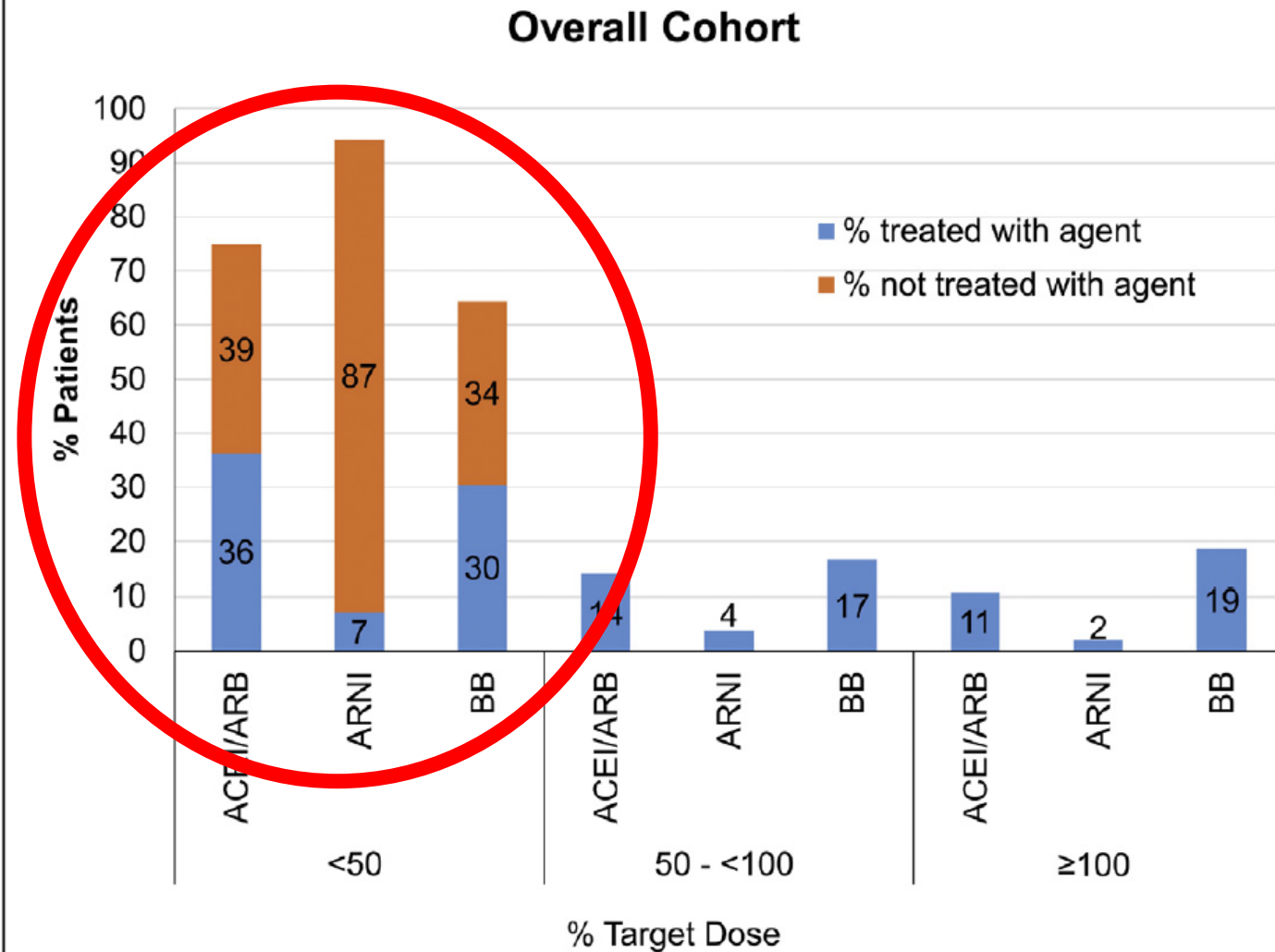
O ptimal

M edical

T reatment

FMR and OMT

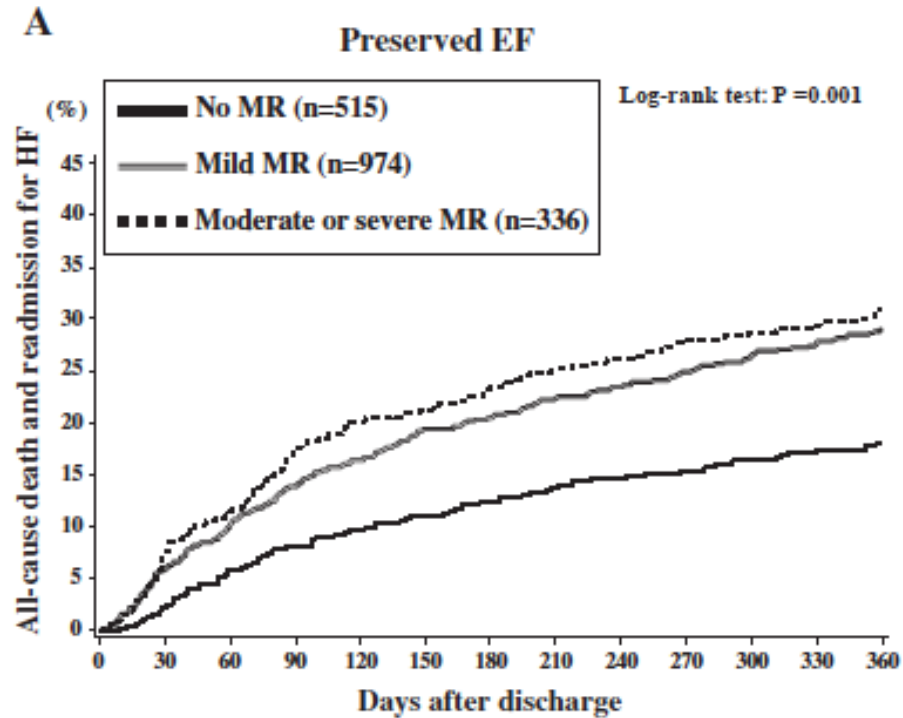
FIGURE 1 Distribution of Percent Target Doses for Each Medication Class in the Overall Cohort



Target dose
 $\leq 30\%$

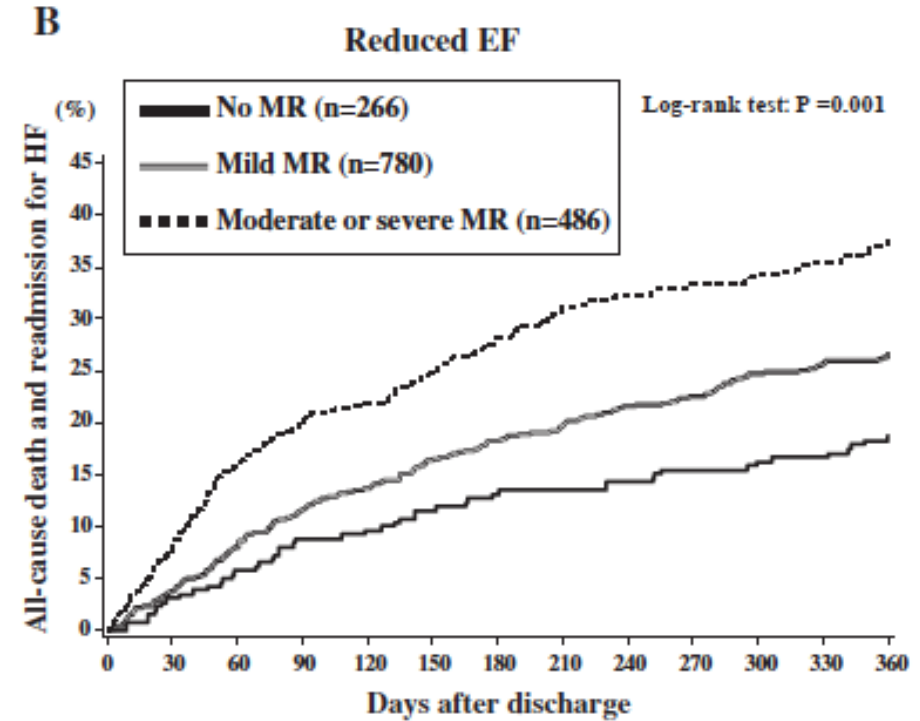
undertreated
 $\approx 70\%$

Persistent FMR after a HF admission



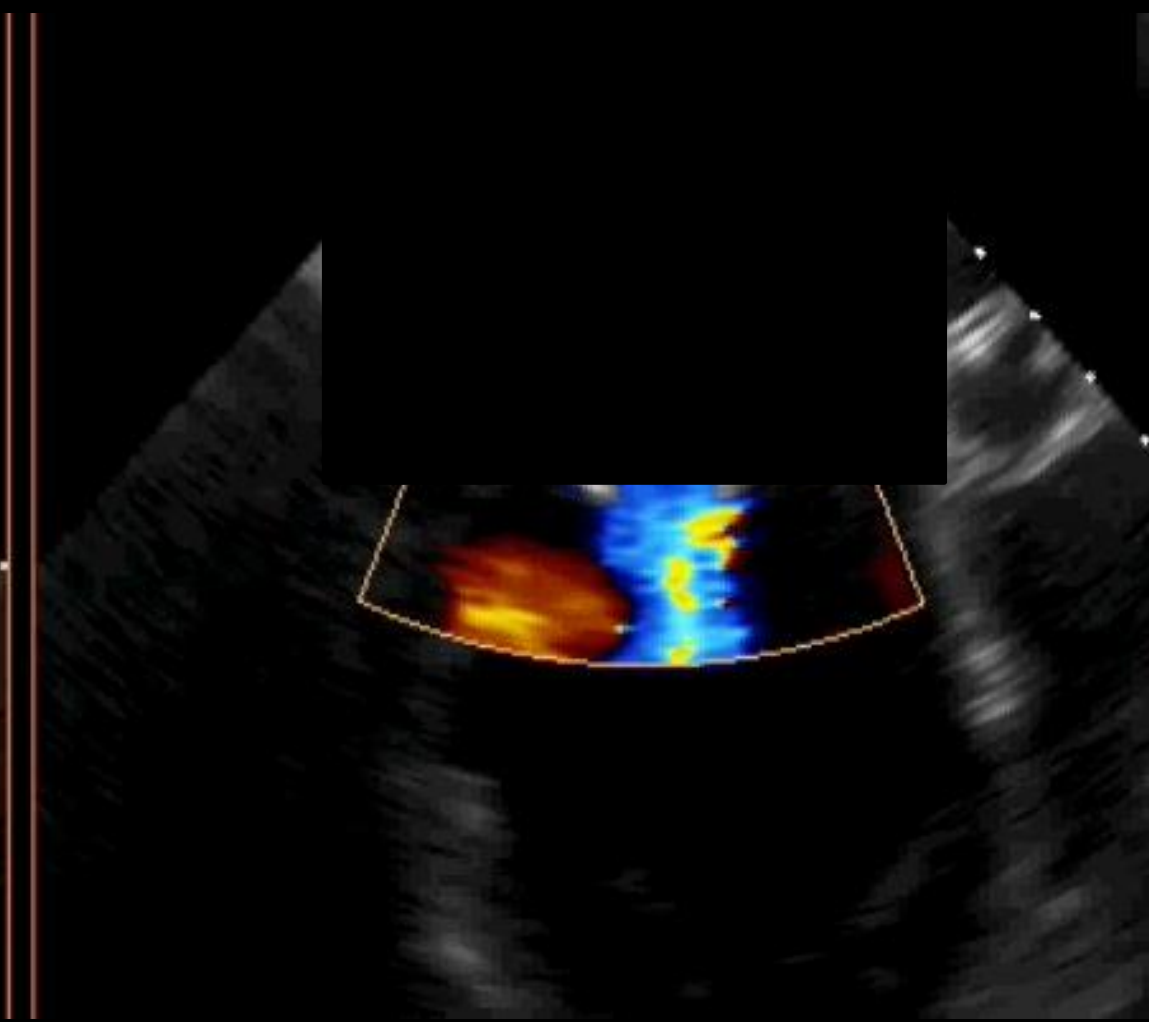
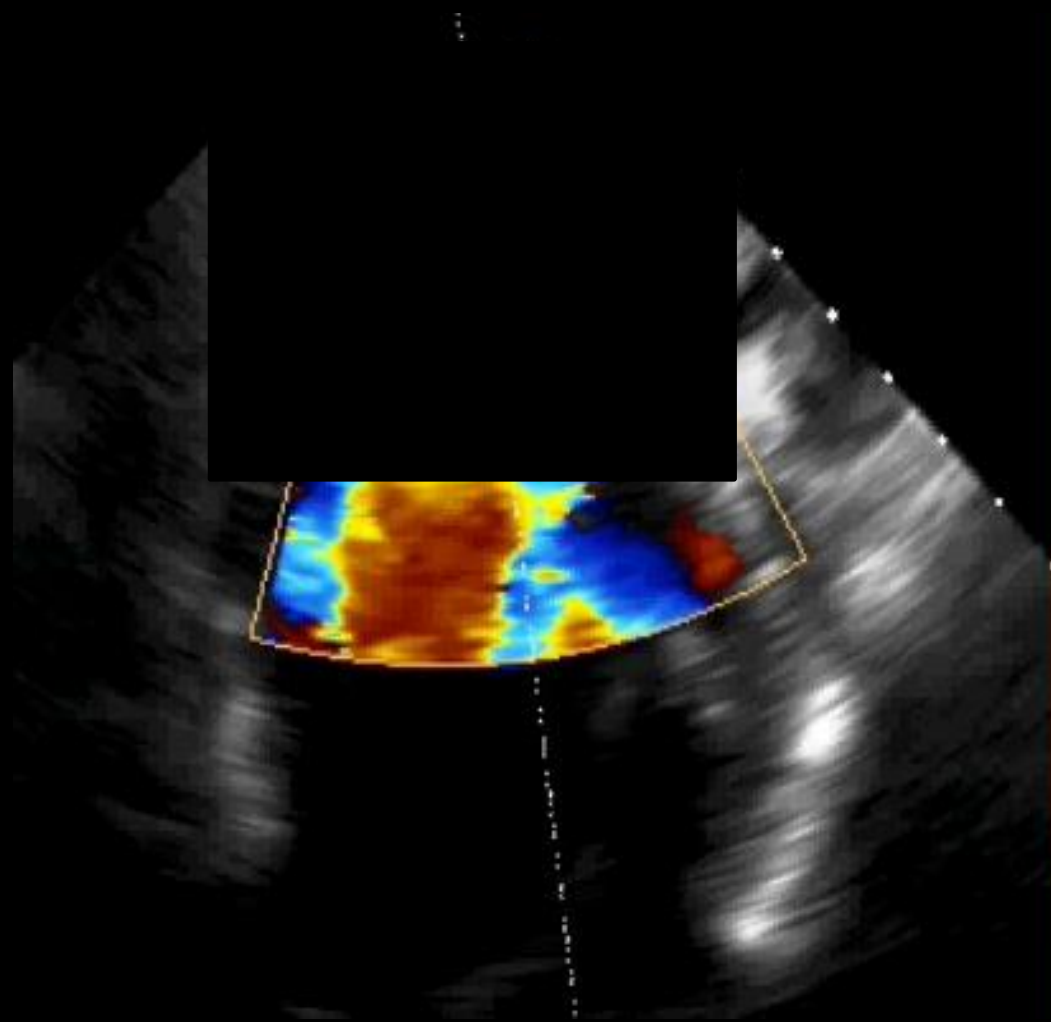
Number at risk

	0	30	60	90	120	150	180	210	240	270	300	330	360
No MR	515	484	462	447	424	409	396						
Mild MR	974	866	804	763	720	688	657						
Moderate/Severe MR	336	295	266	255	240	231	221						



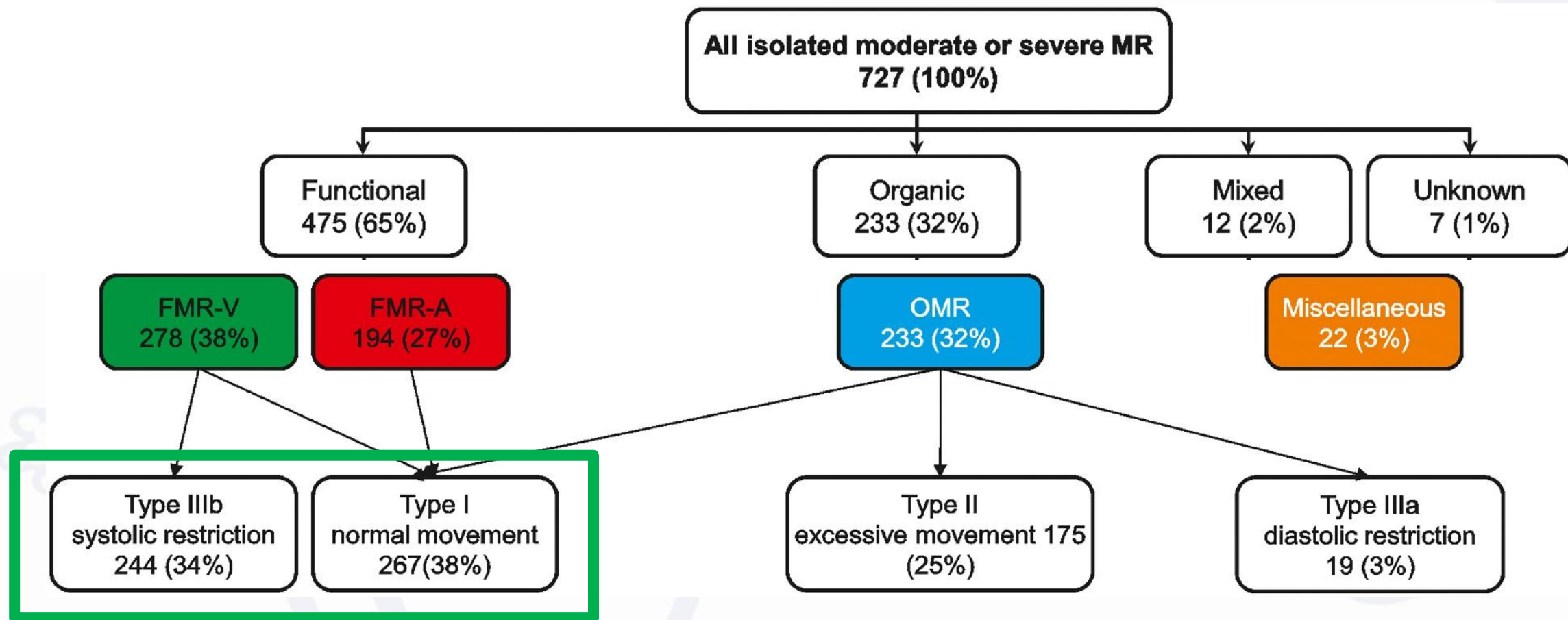
Number at risk

	0	30	60	90	120	150	180	210	240	270	300	330	360
No MR	266	246	234	223	215	208	201						
Mild MR	780	707	661	624	587	557	539						
Moderate/Severe MR	486	405	374	342	312	300	281						



Causes and mechanisms of isolated mitral regurgitation in the community: clinical context and outcome

Volha Dziadzko, Mikhail Dziadzko , Jose R. Medina-Inojosa, Giovanni Benfari, Hector I. Michelena, Juan A. Crestanello, Joseph Maalouf, Prabin Thapa, and Maurice Enriquez-Sarano*



Impact of Mitral TEER Mitral on GDMT Uptitration.

GDMT Uptitration After M-TEER



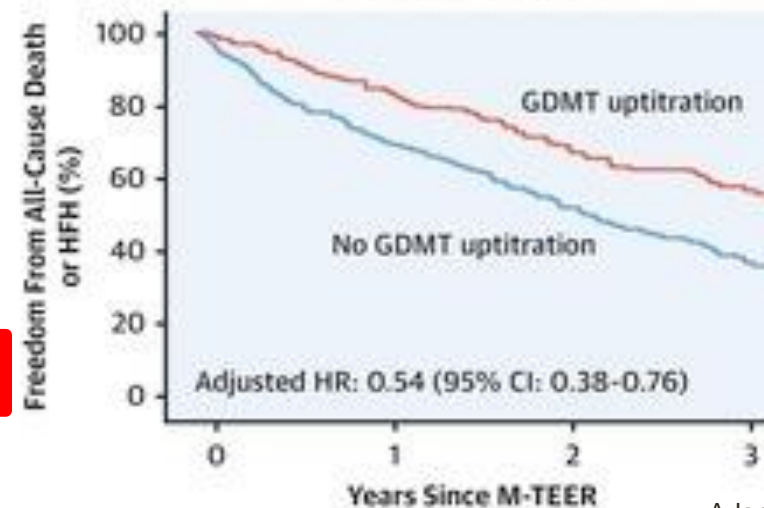
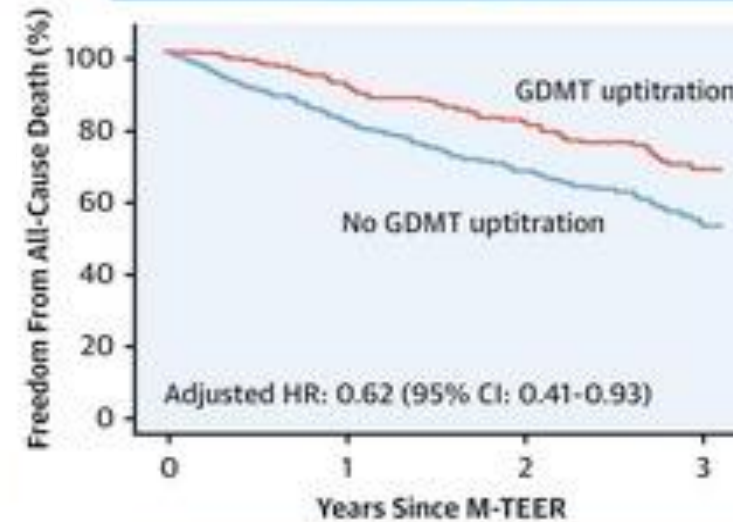
■ No uptitration ■ Uptitration

Predictors of GDMT Uptitration

Variables*	OR (95% CI)	P Value
NT-proBNP	1.16 (0.56-2.41)	0.695
Systolic pulmonary artery pressure	0.99 (0.97-1.02)	0.513
Previous myocardial infarction	0.81 (0.38-1.75)	0.593
Mean arterial blood pressure	1.00 (0.98-1.02)	0.868
Glomerular filtration rate	1.01 (0.99-1.02)	0.280
MR reduction of at least 3 grades	1.71 (1.08-2.71)	0.022
NYHA improvement (≥1 class)	0.66 (0.35-1.25)	0.200



Association Between GDMT Uptitration and Outcomes



Old

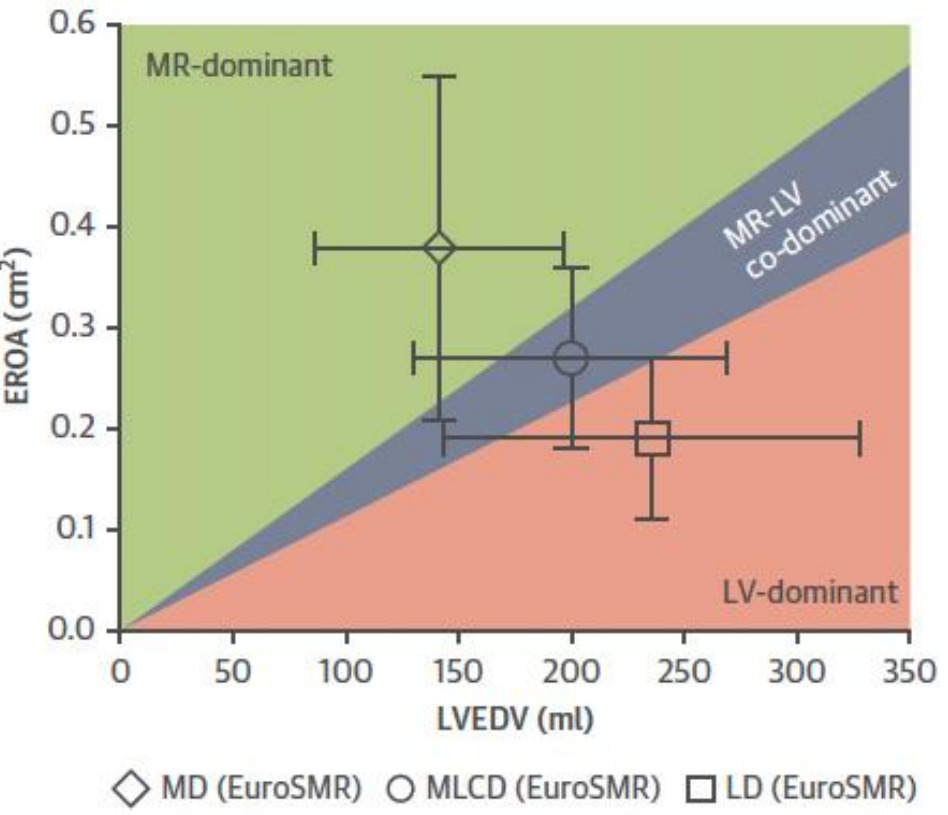
Mitral

Treatment

Impact of Proportionality of Secondary Mitral Regurgitation on Outcome After Transcatheter Mitral Valve Repair

1016 ptes
FU 22 meses

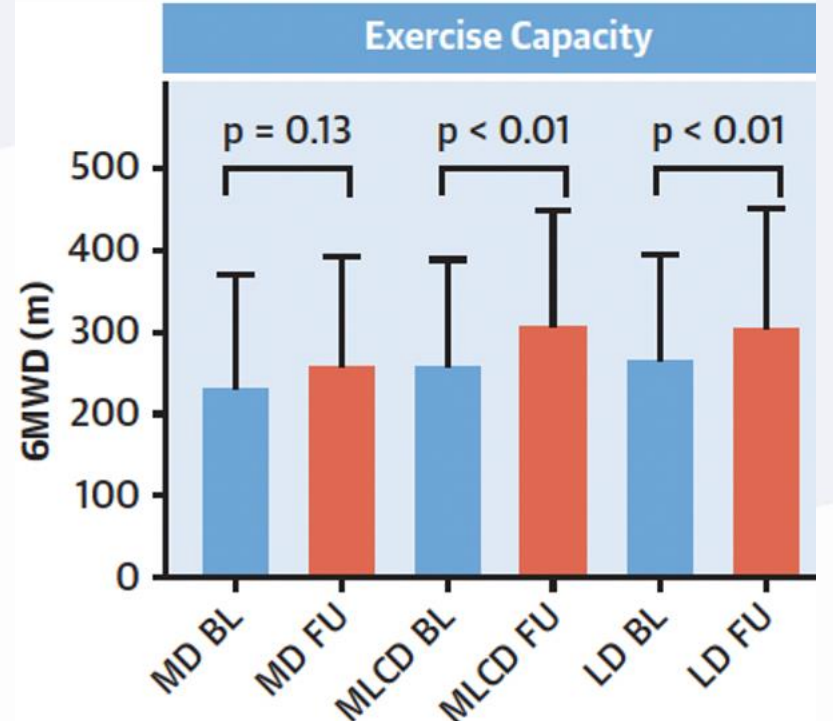
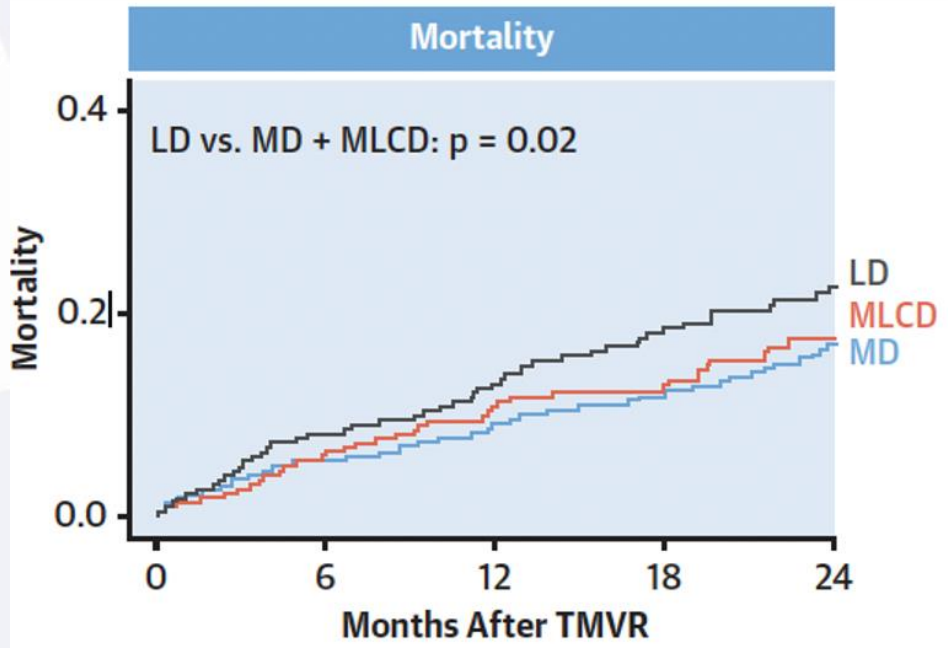
EROA / LVEDV



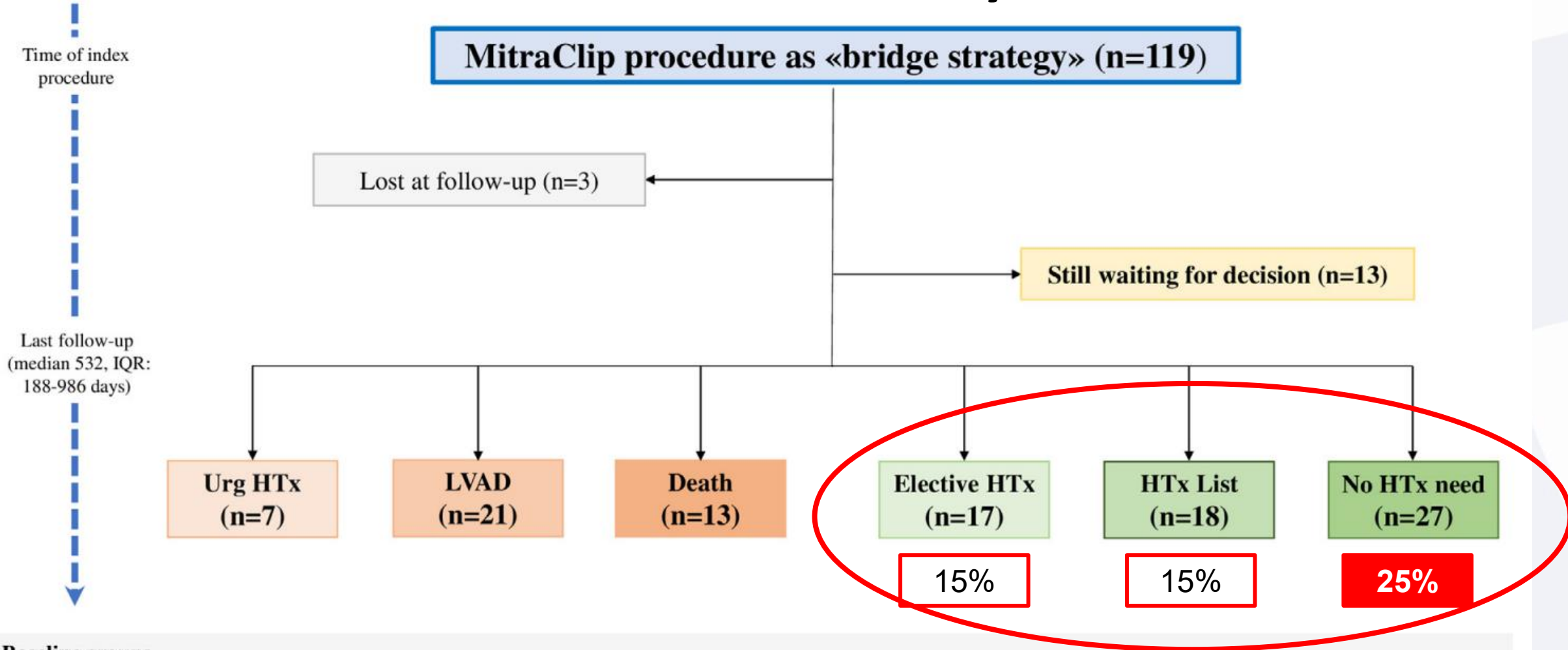
Dominant MR
"non-proportionate MR"

Co-dominant MR-LV
"proportionate MR"

Dominant LV
"non-severe IM"



MitraBRIDGE study



Baseline groups

In List (%)	5 (16)	0 (0)	2 (6.5)	8 (26)	10 (32)	5 (16)
BTD (%)	1 (2)	16 (29.5)	8 (15)	5 (9)	4 (7.5)	12 (22)
BTC (%)	1 (3)	5 (15)	3 (9)	4 (12)	4 (12)	10 (29.5)

4

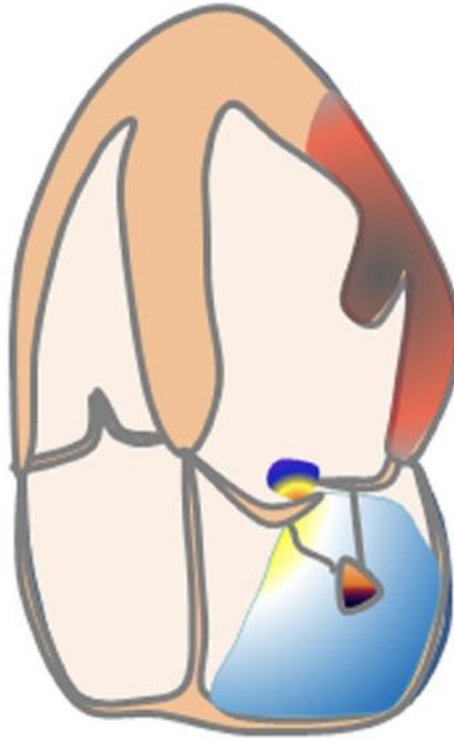
Acute MR

Endocarditis



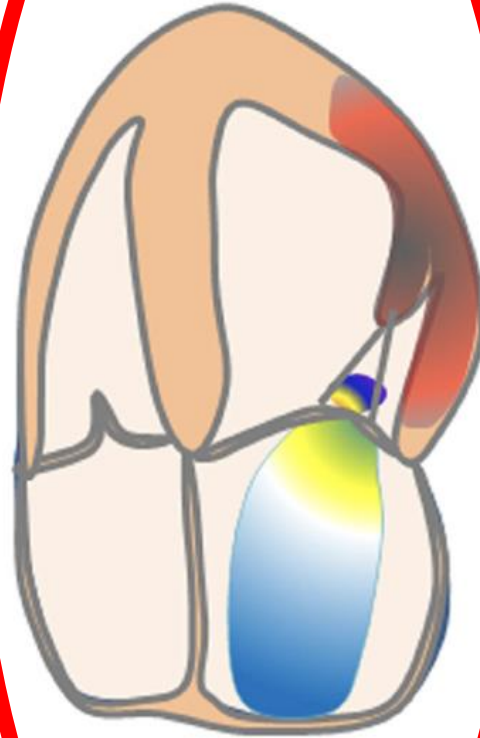
Vegetation
Leaflet prolapse
Leaflet perforation

PM rupture



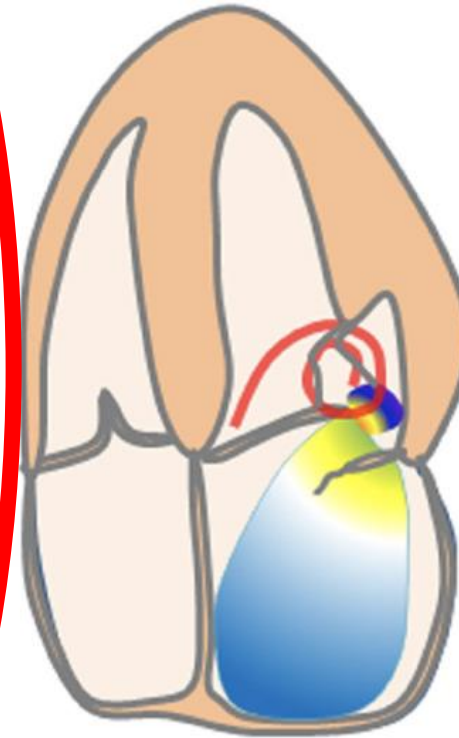
Regional wall motion
abnormality
Ruptured PM head

Ischaemic



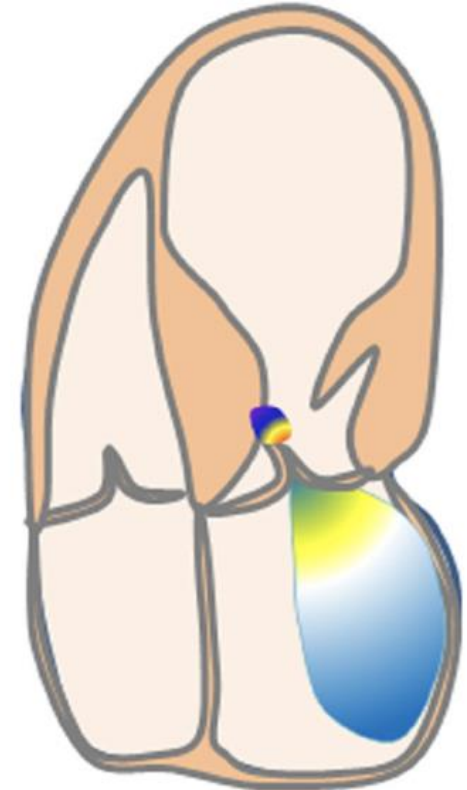
Regional wall motion
abnormality
Leaflet tethering

Device-related



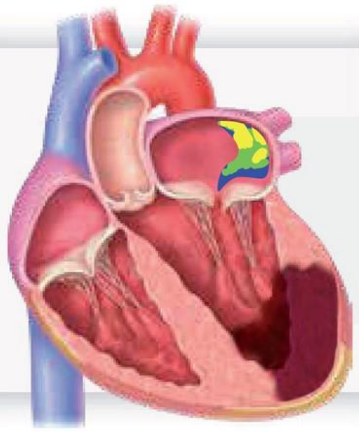
Tethered or ruptured
chordae by tangled
guidewire/catheter

Takotsubo



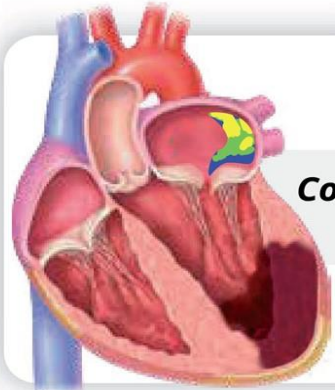
Apical ballooning
Hyperkinetic basal LV
SAM

Conservative, surgical, and percutaneous treatment for mitral regurgitation shortly after acute myocardial infarction



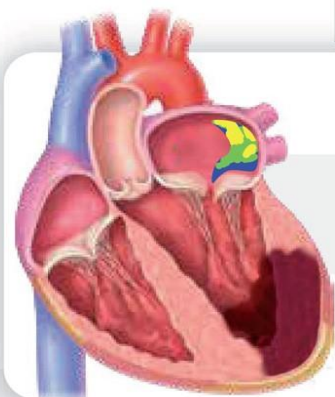
Severe secondary mitral regurgitation shortly after myocardial infarction
 $n = 471$

90 days after AMI

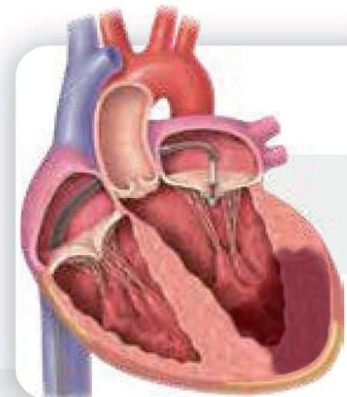


Conservative Treatment
 $(n = 266)$

Interventional treatment
 $(n = 205)$



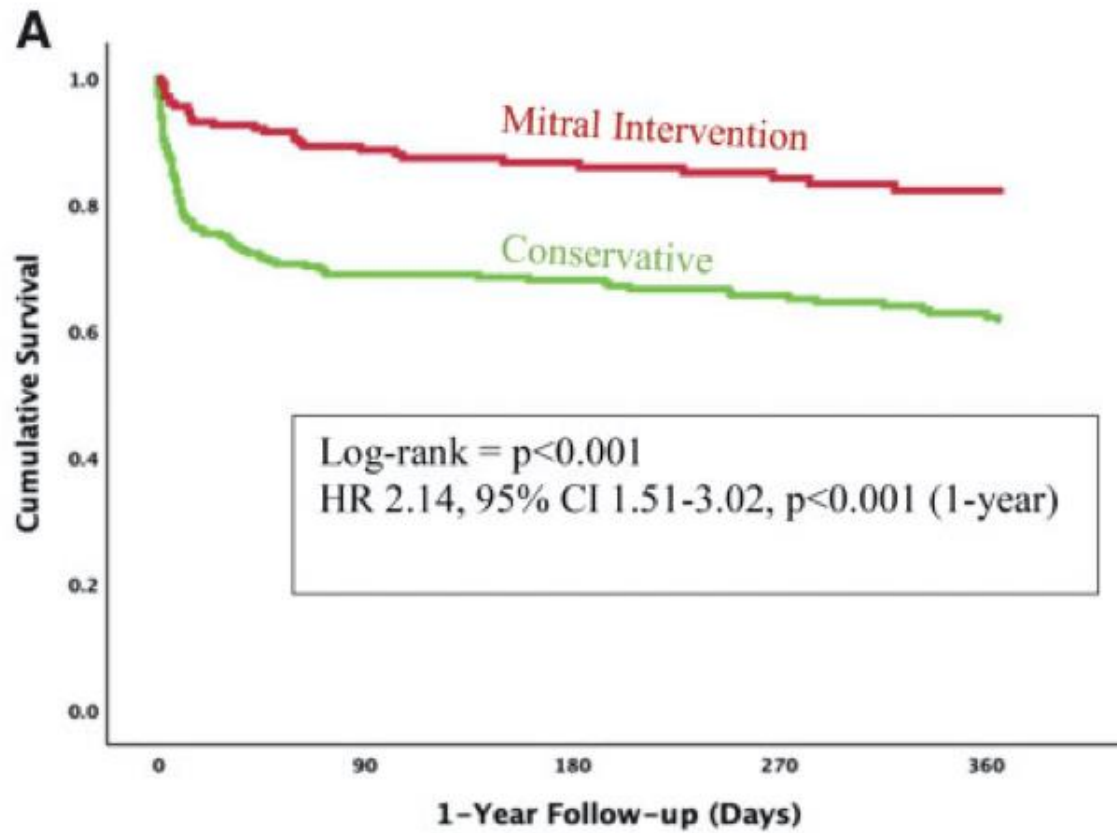
SMVR
 $(n = 106)$
Surgical mitral valve repair



PMVR
 $(n = 99)$
Percutaneous mitral valve repair



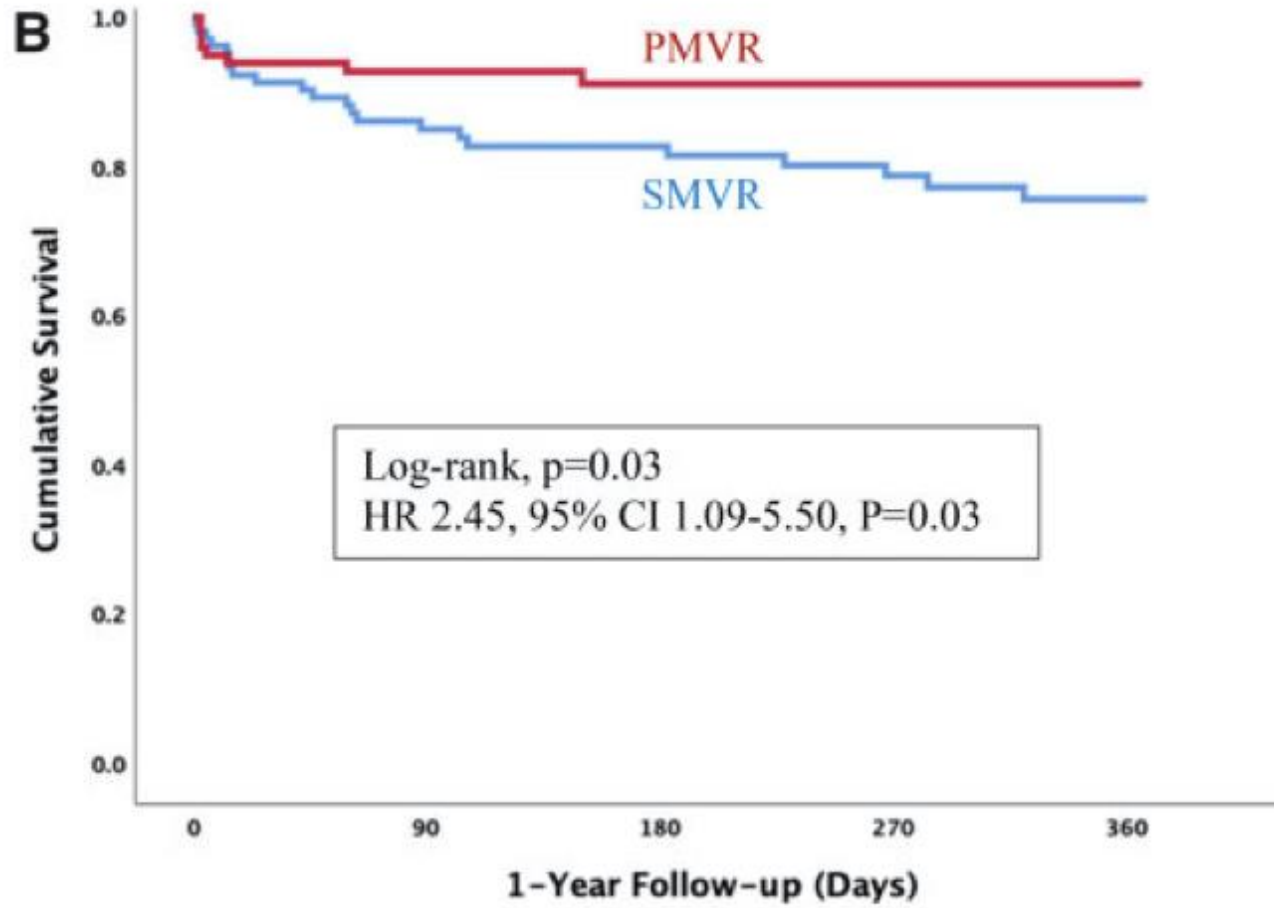
Universidad de Oviedo



Number at Risk	0	3-Month	6-Month	9-Month	1-Year
Conservative	256	161	147	126	90
Intervention	201	184	139	115	64



Universidad de Oviedo



Number at Risk	0	3-Month	6-Month	9-Month	1-Year
SMVR	103	77	66	53	36
PMVR	98	72	55	38	28

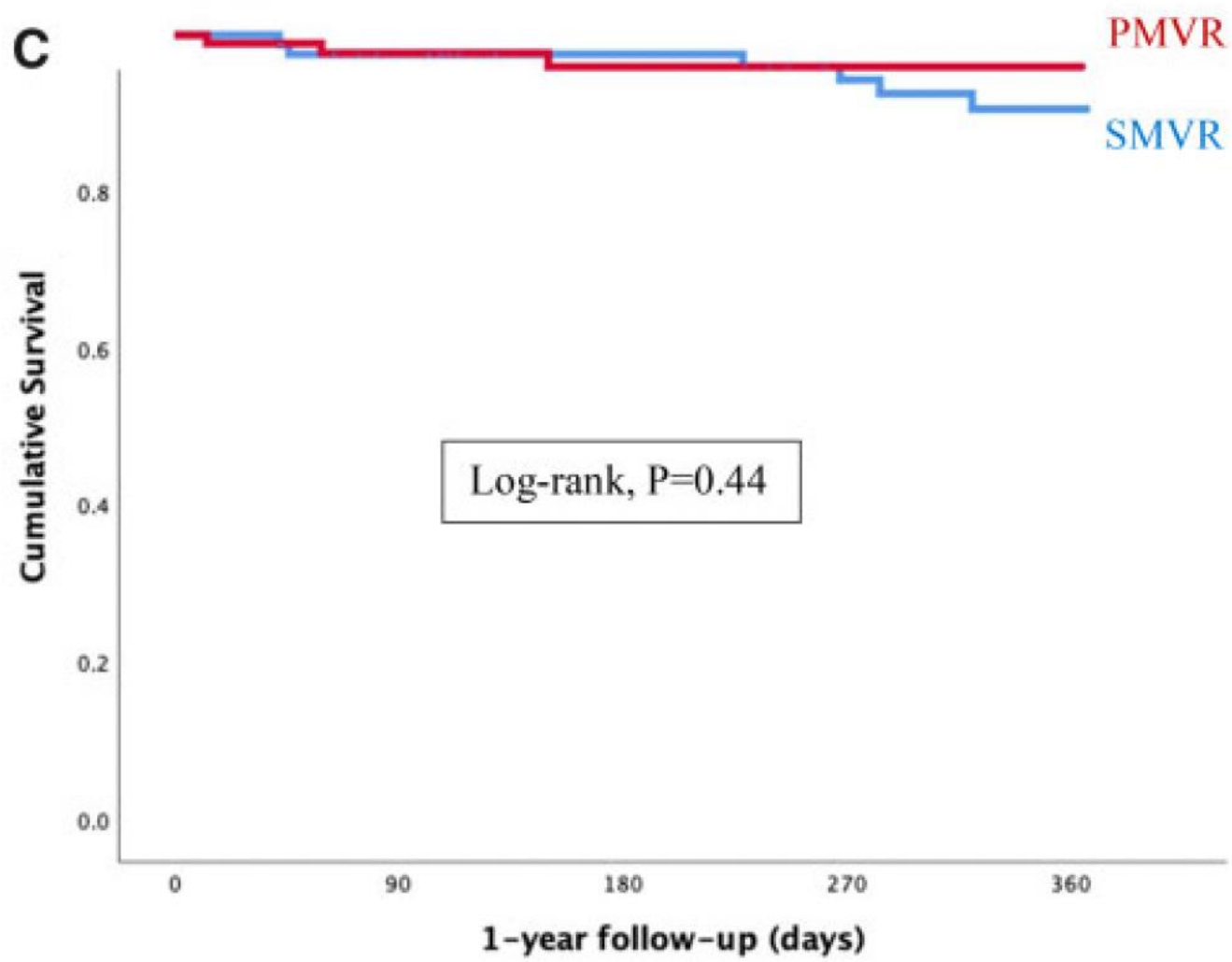


Table 2 Procedural details and patient outcomes of surgical mitral valve repair or replacement and percutaneous mitral valve repair

Variable	SMVR (n = 106)	PMVR (n = 99)	P-value
Procedure			
Procedure time, min	150 [118–240]	90 [60–136]	<0.01
MI to Procedure, days	12 [5–19]	19 [10–40]	<0.01
MR >2 at discharge	9 (8)	8 (8)	0.80
Major complications	36 (34)	6 (6)	<0.01
Outcomes			
Procedure success	98 (92)	92 (93)	0.53
In-hospital mortality	17 (16)	6 (6)	0.03
Mortality at 3 months	21 (20)	10 (10)	0.13
Rehospitalization at 3 months	6 (6)	13 (13)	0.14
1-year mortality	32 (31)	16 (17)	0.04



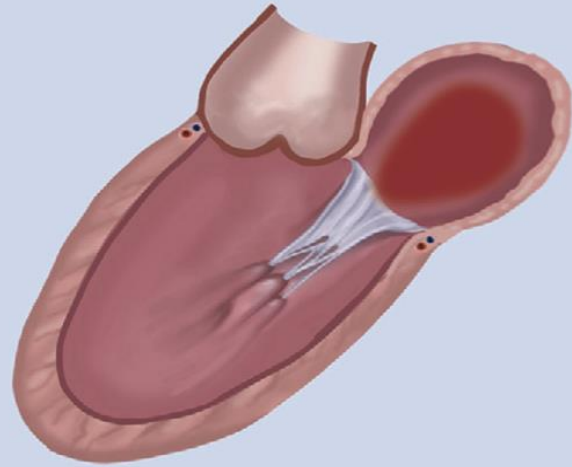
Universidad de Oviedo



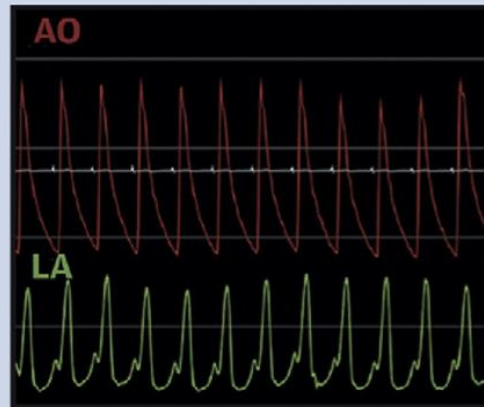
Number at Risk	0	3-Month	6-Month	9-Month	1-Year
SMVR	86	73	66	54	40
PMVR	92	62	48	38	28

CENTRAL ILLUSTRATION: Mitral Regurgitation and Cardiogenic Shock: Role of Transcatheter Edge-to-Edge Repair

3,797 Patients in STS/ACC TVT Registry



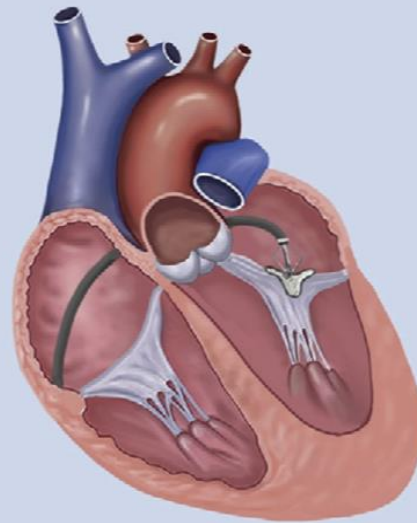
Severe MR + Cardiogenic Shock



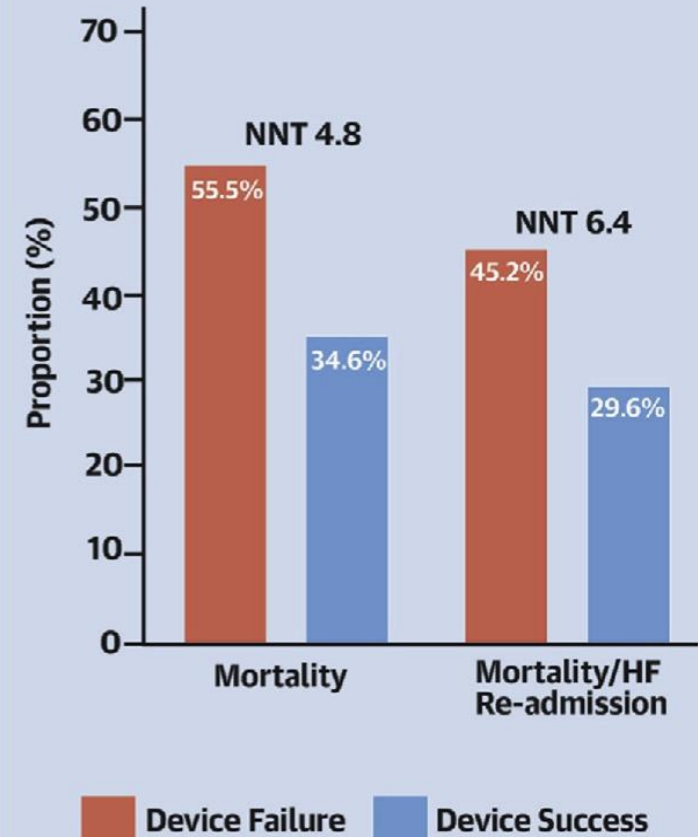
Mitral TEER Procedure

Device Success 85.6%

Device Failure 14.4%



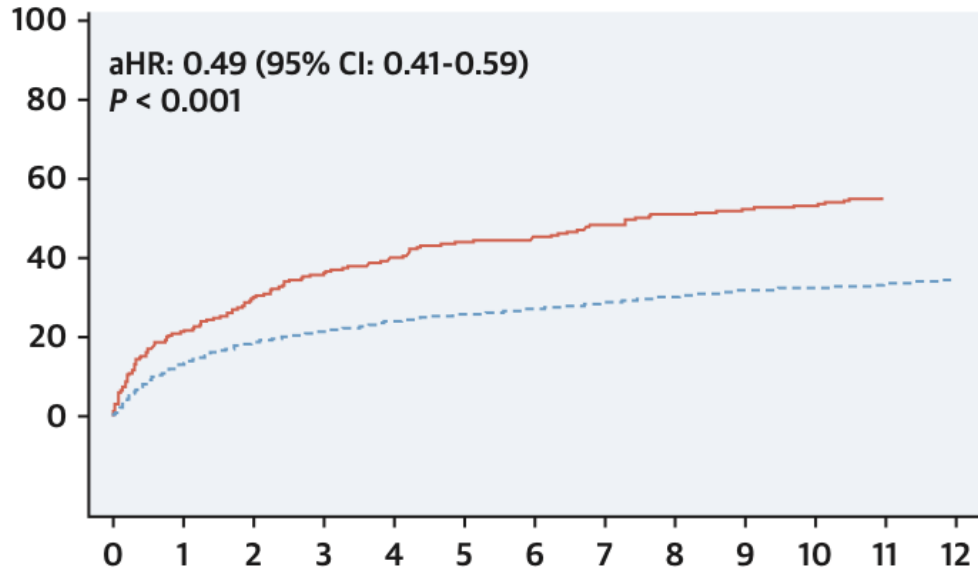
1-Year Clinical Outcomes





A

Mortality

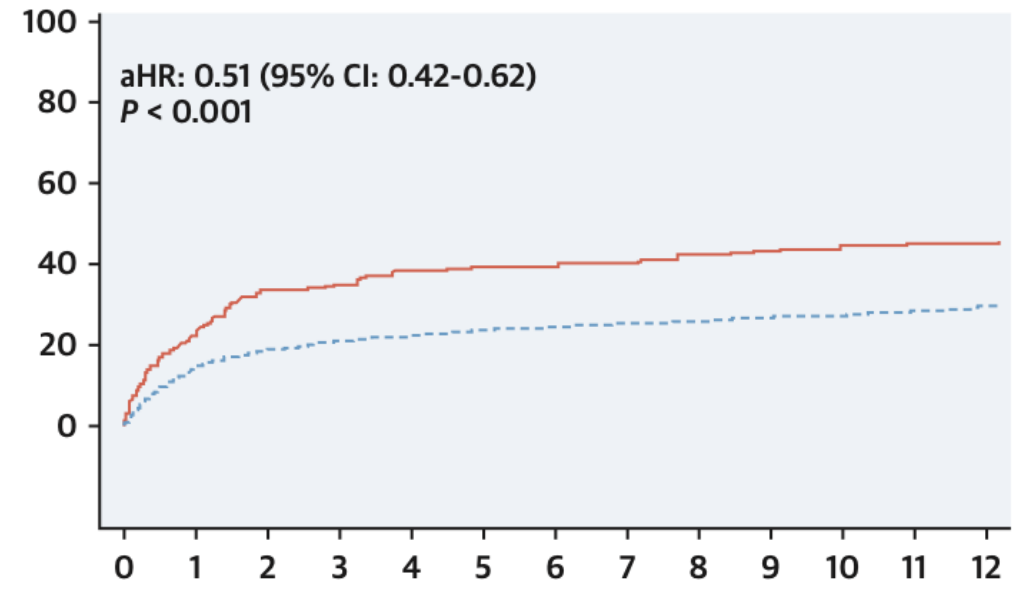


Procedure	0	1	2	3	4	5	6	7	8	9	10	11	12
— Device Failure	397	272	202	178	166	154	149	141	133	130	126	103	79
- - - Device Success	2,334	1,786	1,410	1,318	1,271	1,238	1,214	1,186	1,161	1,129	1,110	1,023	821

NNT 4.8

B

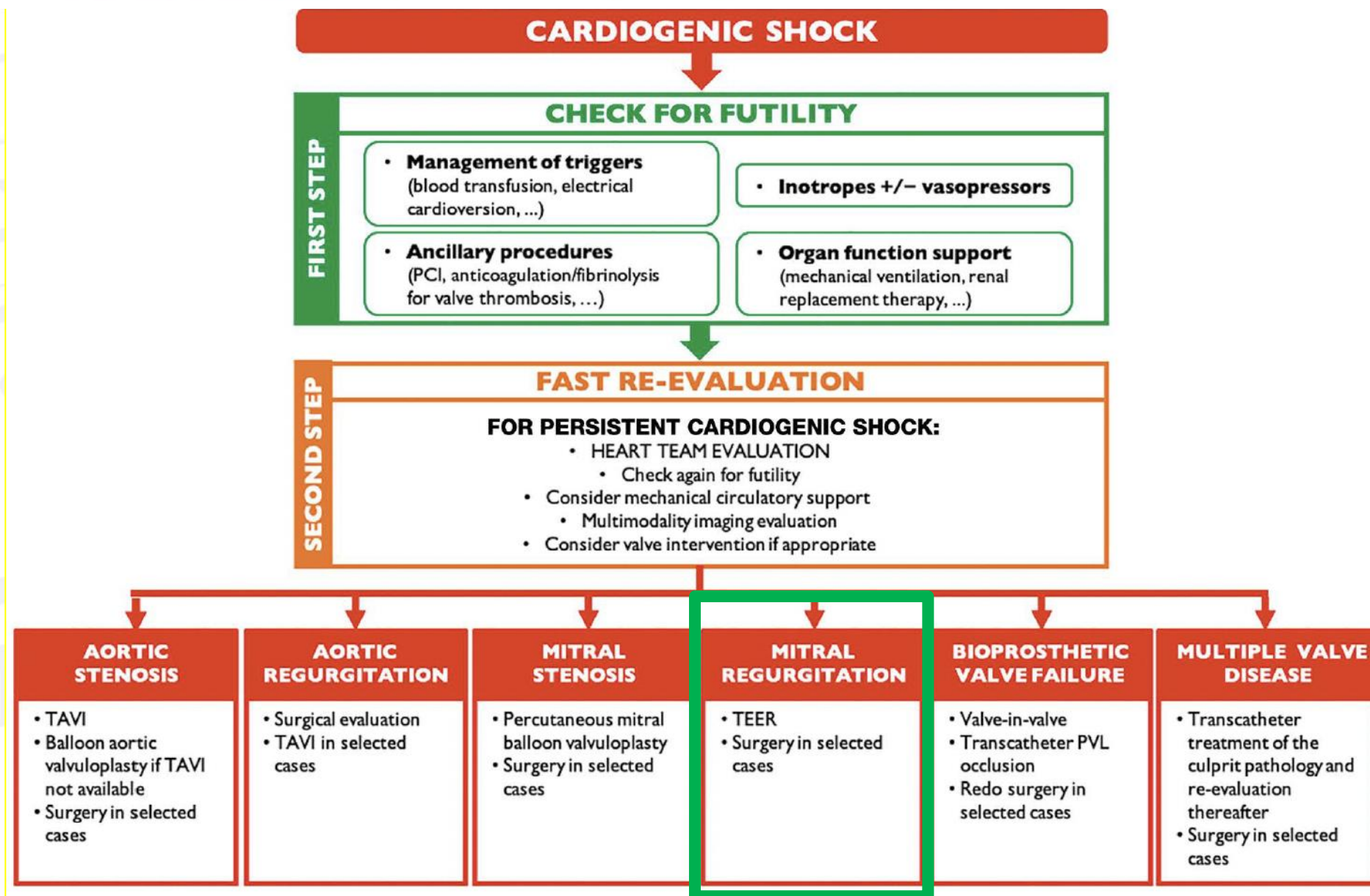
Mortality or Heart Failure Readmission



Procedure	0	1	2	3	4	5	6	7	8	9	10	11	12
— Device Failure	397	243	153	137	124	117	115	112	105	102	97	80	59
- - - Device Success	2,334	1,670	1,255	1,141	1,089	1,052	1,027	1,003	985	960	944	864	684

NNT 6.4

CENTRAL ILLUSTRATION Diagnostic and therapeutic algorithm in cardiogenic shock and valvular heart disease.



ClinicalTrials.gov

NCT06282042

Early Transcatheter Mitral Valve Repair after Myocardial Infarction (EMCAMI)

#	Spain Study Centers
101	Hospital Universitario Central de Asturias
102	Hospital Clinic y Provincial de Barcelona
103	Hospital Universitario Virgen de la Victoria de Málaga
104	Hospital Universitario de Córdoba
105	Hospital Universitario del a Santa Creu i San Pau de Barcelona
106	Hospital Alvaro Cunqueiro de Vigo
107	Hospital Universitario Puerto de Hierro de Madrid
108	Hospital Clínico Universitario San Carlos de Madrid
109	Hospital Clínico Universitario de Valladolid
110	Hospital de la Vall d'Hebron de Barcelona
111	Hospital Universitario Ramón y Cajal de Madrid
112	Hospital Universitario de Gran Canaria
113	Hospital Universitario Marqués de Valdecilla
114	Hospital Universitario de Alicante
115	Hospital Universitario Bellvitge de Barcelona

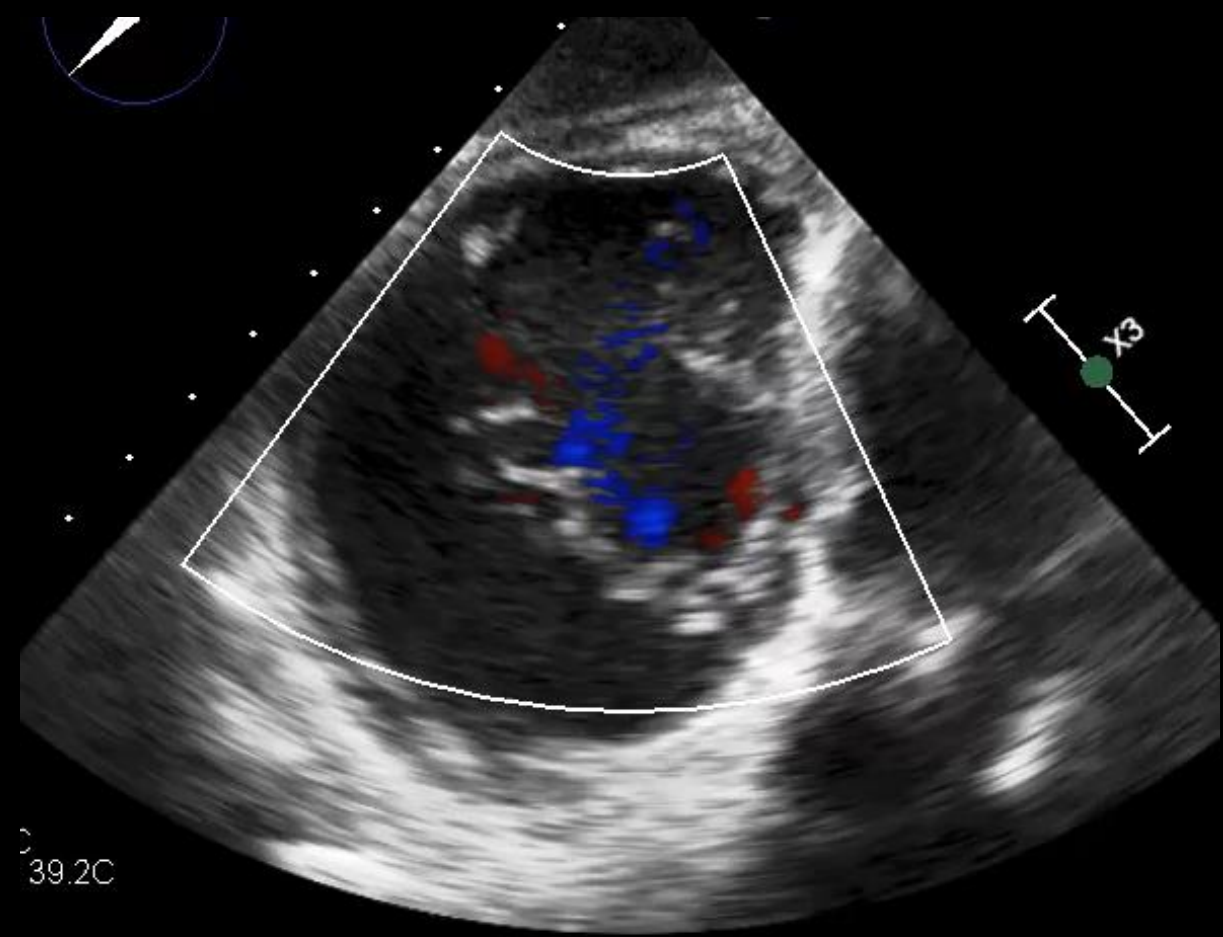
#	Netherlands Study Centers
201	Maastricht University Medical Center
202	Amphia Hospital, Breda
203	Amsterdam University Medical Center
204	Catharina Hospital, Eindhoven
205	St. Antonius Hospital, Nieuwegein
206	Isala Hospital, Zwolle
207	Leiden University Medical Center

#	Israel Study Centers
301	Shaare Zedek Medical Center, Jerusalem
302	Rabin Medical Center, Petah Tikva
303	Sheba Medical Center, Tel Aviv

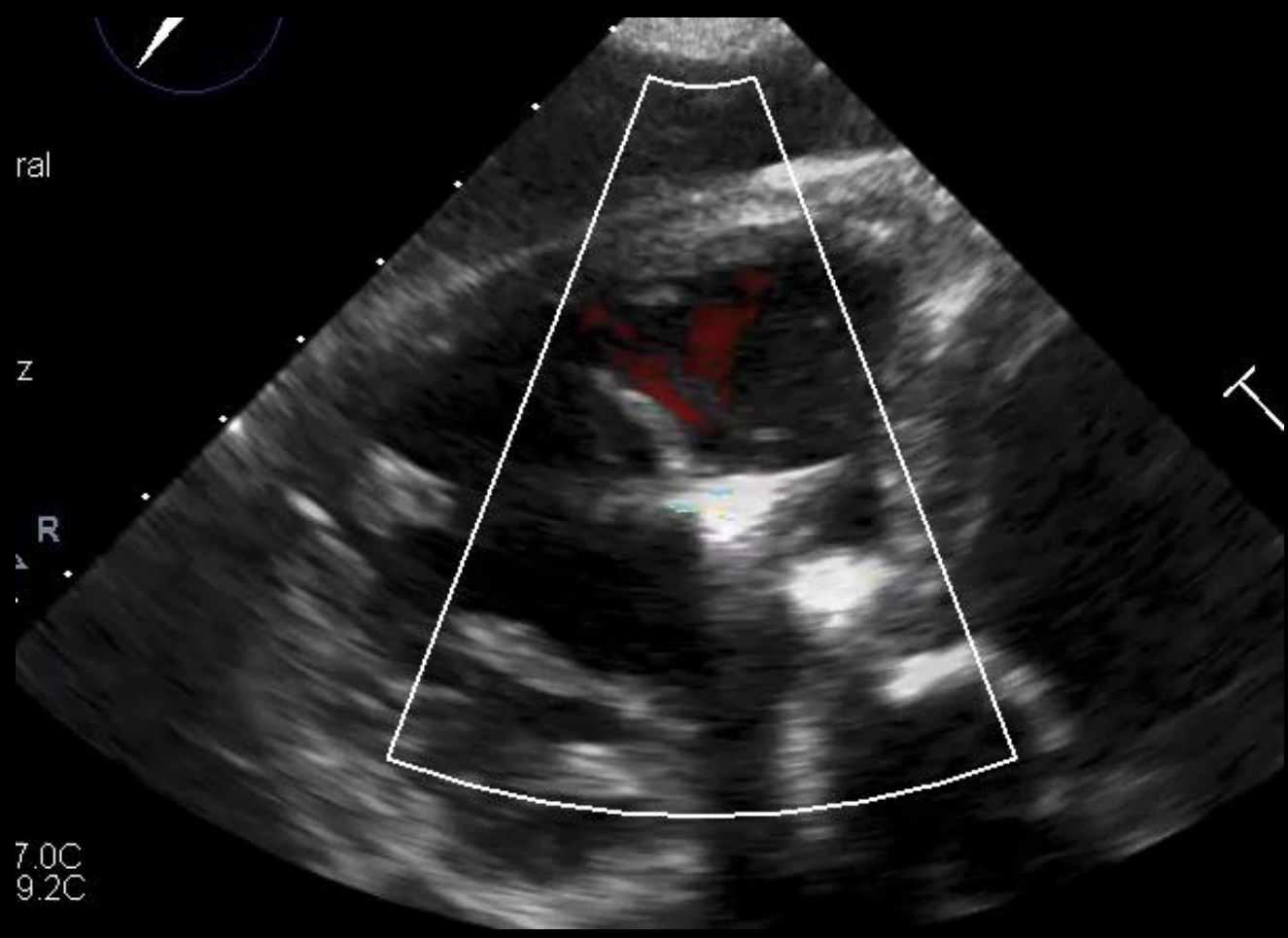
#	Italy Study Centers
401	Hospital San Raffaele, Milan, Italy
402	San Donato Hospital, Milan, Italy
403	University and Civil Hospitals of Brescia, Italy

5

TR-TEER



39.2C



7.0C
9.2C

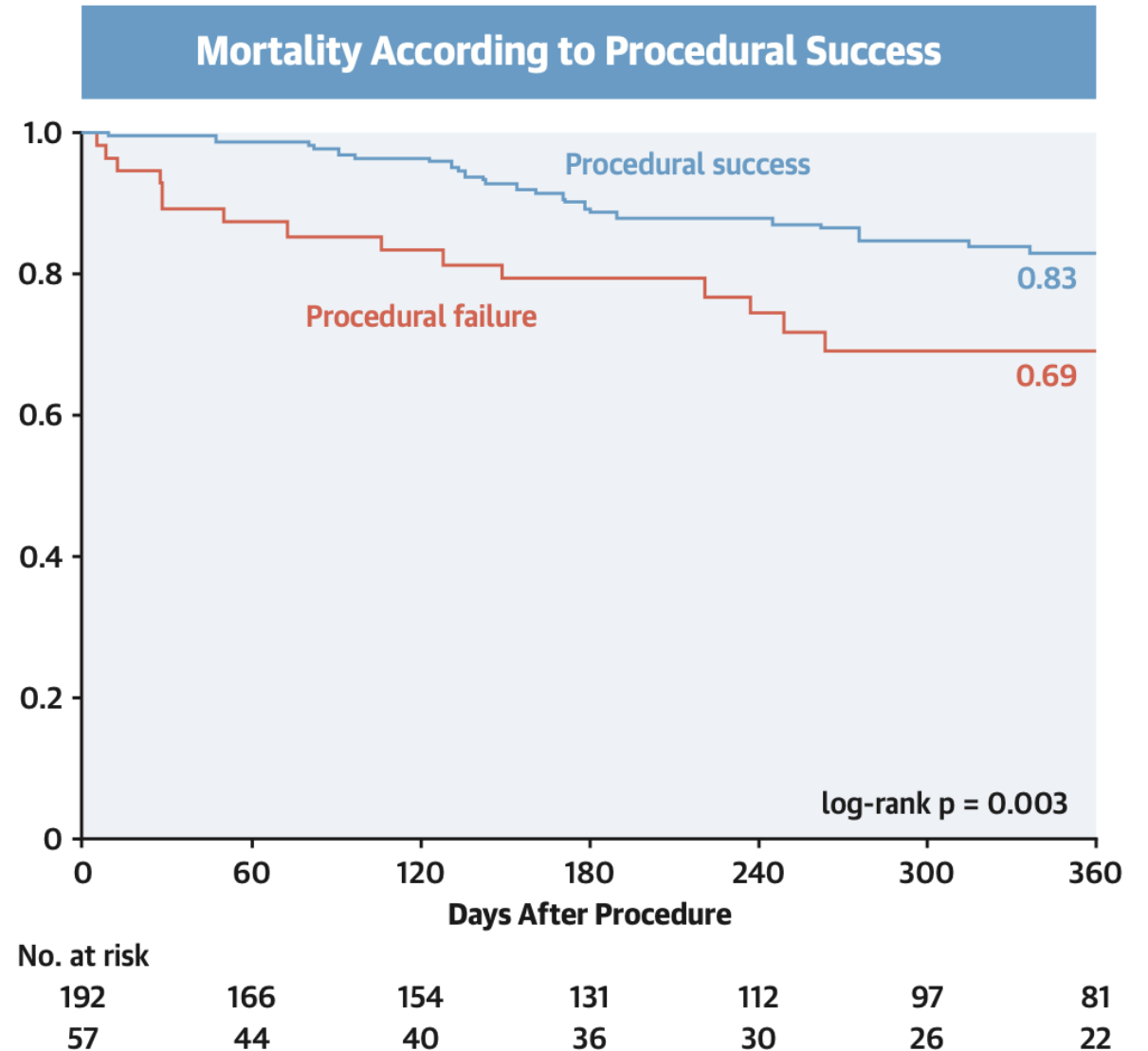
1-Year Outcomes After Edge-to-Edge Valve Repair for Symptomatic Tricuspid Regurgitation

Results From the TriValve Registry

TABLE 4 Univariate and Multivariate Analysis of Procedural Failure

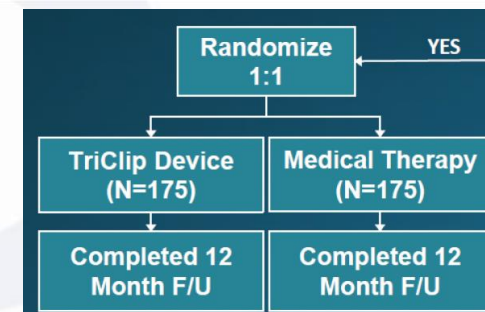
	Univariate		Multivariate*	
	OR (95% CI)	p Value	OR (95% CI)	p Value
Pacemaker or ICD lead	1.53 (0.81-2.84)	0.18		
LVEF	1.00 (0.98-1.02)	0.95		
TAPSE	1.02 (0.95-1.10)	0.55		
MR grade	1.10 (0.84-1.44)	0.48		
TR vena contracta	1.76 (0.87-3.53)	0.11		
TR coaptation gap >6.5 mm	6.16 (3.19-12.18)	<0.001	1.23 (1.10-1.38)	<0.001
TR EROA >0.695 cm ²	4.79 (2.52-9.33)	<0.001	1.21 (1.09-1.35)	<0.001
TR coaptation depth >9.75 mm	3.17 (1.71-6.04)	<0.001	1.01 (0.90-1.44)	0.83
TR tenting area >3.15 cm ²	4.78 (2.49-9.30)	<0.001	1.18 (1.01-1.37)	0.035
Noncentral or nonanteroseptal TR jet location	2.38 (0.98-5.52)	0.047	1.21 (1.04-1.41)	0.013
Tricuspid annular diameter	1.03 (0.99-1.08)	0.098	1.00 (0.99-1.00)	0.60
Concomitant mitral valve edge-to-edge repair	0.66 (0.36-1.20)	0.17		
Number of clips	0.81 (0.57-1.12)	0.20		

CENTRAL ILLUSTRATION Kaplan-Meier Estimates of 1-Year Mortality According to Procedural Failure After Edge-to-Edge Tricuspid Valve Repair



TRILUMINATE trial

(TriClip, Abbott Vasc)



Transcatheter Repair for Patients with Tricuspid Regurgitation

- Primary end point favored the TEER group (win ratio, 1.48; 95% CI, 1.06 -2.13; P = 0.02).
- No effects on HF hospitalizations and survival were observed at 1 year.

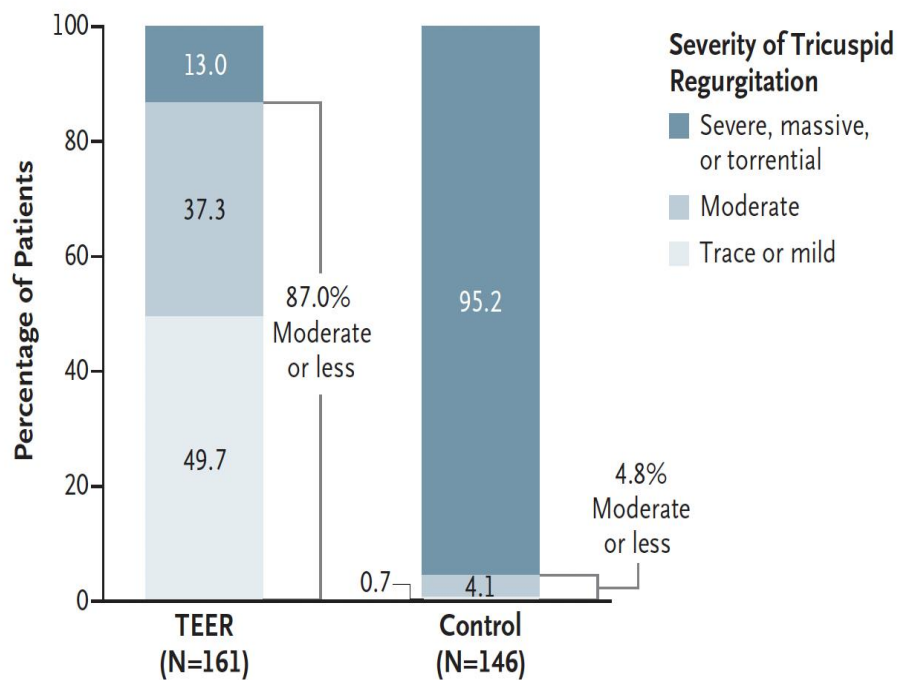
Table 2. Primary and Secondary End Points.*

End Point	TEER Group (N=175)	Control Group (N=175)	Difference (95% CI)	P Value
Primary				
Hierarchical composite of death from any cause or tricuspid-valve surgery; hospitalization for heart failure; and improvement of ≥ 15 points in KCCQ score at 1 yr — no. of wins [†]	11,348	7643	1.48 (1.06 to 2.13)	0.02
Secondary, listed in hierarchical order				
Kaplan–Meier estimate of percentage of patients with freedom from major adverse events through 30 days after the procedure (lower 95% confidence limit) [‡]	98.3 (96.3)	—	—	<0.001
Change in KCCQ score from baseline to 1 yr — points [§]	12.3 \pm 1.8	0.6 \pm 1.8	11.7 (6.8 to 16.6)	<0.001
Tricuspid regurgitation of no greater than moderate severity at 30-day follow-up — no. of patients/total no. (%) [¶]	140/161 (87.0)	7/146 (4.8)	—	<0.001
Change in 6-min walk distance from baseline to 1 yr — m	-8.1 \pm 10.5	-25.2 \pm 10.3	17.1 (-12.0 to 46.1)	0.25

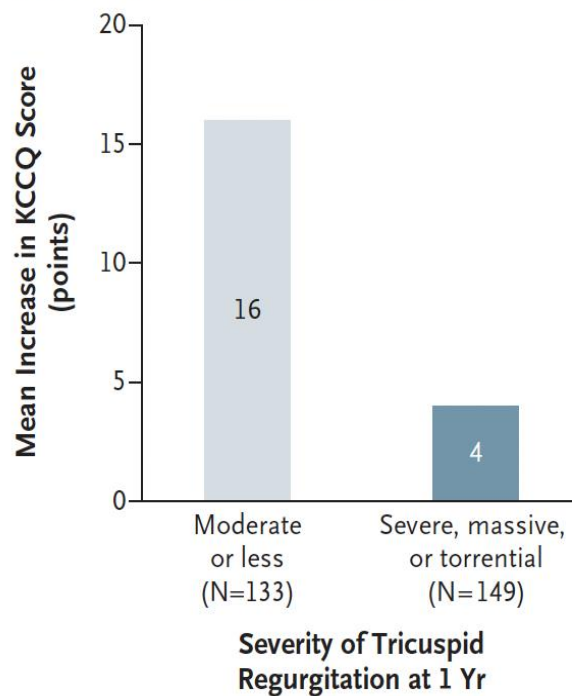
Transcatheter Repair for Patients with Tricuspid Regurgitation

TRILUMINATE trial

(TriClip, Abbott Vasc)



A Change in Quality of Life According to Severity of Residual Tricuspid Regurgitation



B Change in Quality of Life According to Magnitude of Reduction in Tricuspid Regurgitation

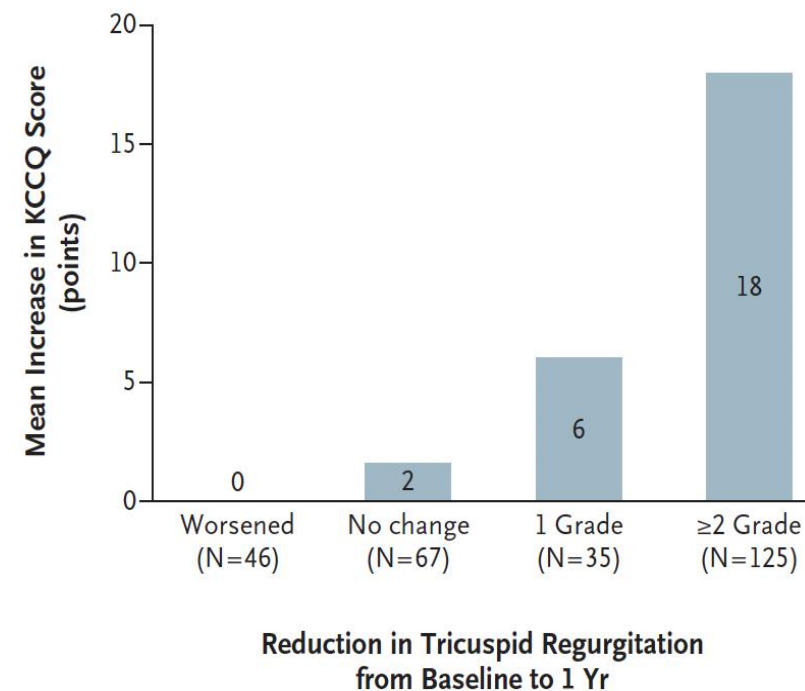


Figure 3. Severity of Tricuspid Regurgitation at 30 Days.

bRIGHT Study

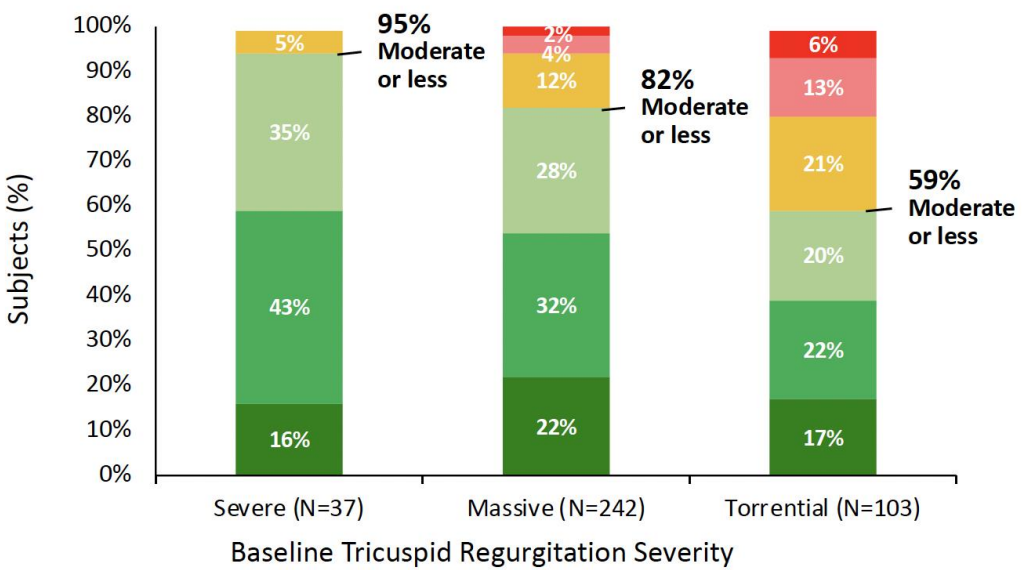
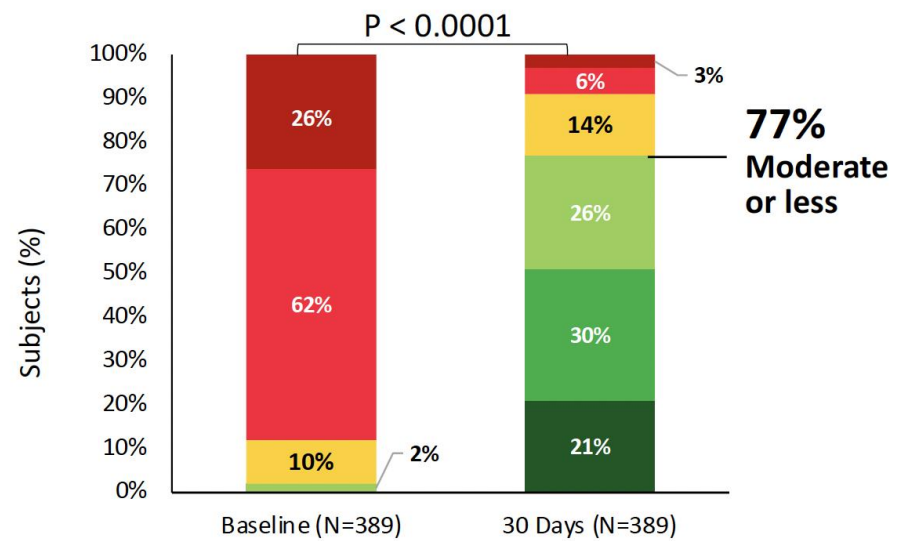
Short-term Outcomes of Tricuspid Edge-to-Edge Repair in Clinical Practice

Philipp Lurz, MD, PhD, Christian Besler, MD, Thomas Schmitz, MD, Raffi Bekerjian, MD, Georg Nickenig, MD, Helge Möllmann, MD, Ralph Stephan von Bardeleben, MD, Alexander Schmeisser, MD, Iskandar Atmowihardjo, MD, Rodrigo Estevez-Loureiro, PhD, MD, Edith Lubos, MD, Megan Heitkemper, PhD, Dina Huang, PhD, Harald Lapp, MD, Erwan Donal, MD

METRIC	N=511
Implant Success	99%
Procedural Success	91%
Device Time (min)	76 ± 39
Total Procedure Time (min)	96 ± 44
Number of Clips	1.9 ± 0.7
Device Type	
NT	1%
XT	56%
NTW	0.1%
XTW	43%

Acute TR Reduction

Paired 30 Day TR Severity **30 Day TR Severity by Baseline TR**



■ None ■ Mild ■ Moderate ■ Severe ■ Massive ■ Torrential



bRIGHT Study

Safety Profile

EVENT **n=511**

MAEs **2.5% (14)**

Cardiovascular Mortality 0.8% (4)

Myocardial Infarction 0.0% (0)

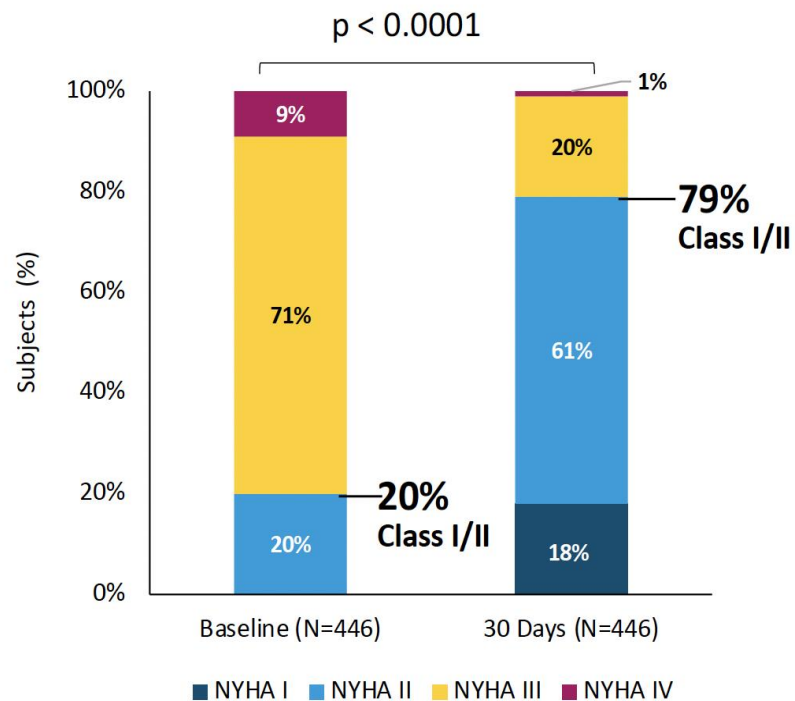
Stroke 0.4% (2)

New Onset Renal Failure 1.4% (7)

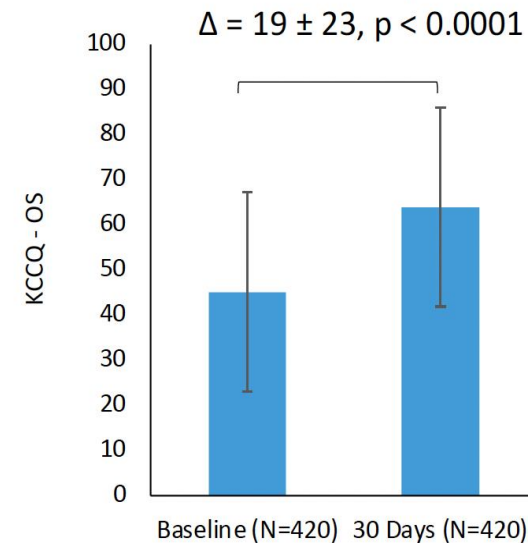
Non-Elective Cardiovascular Surgery for Device-Related AE 0.2% (1)

NYHA & QoL

NYHA FUNCTIONAL CLASS

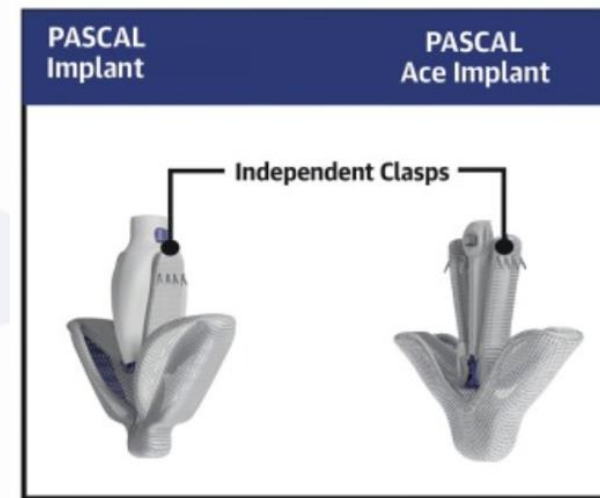


KCCQ

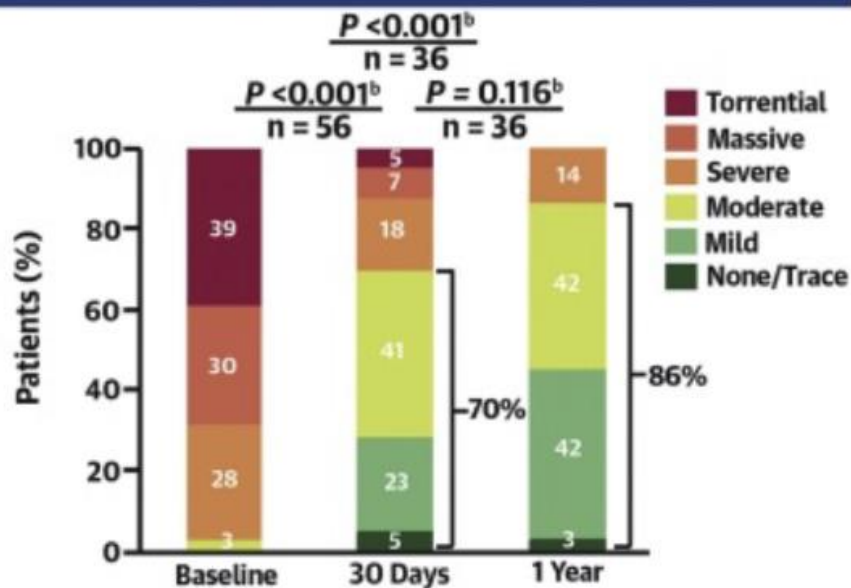


56.2% KCCQ Improvement ≥ 15 pts

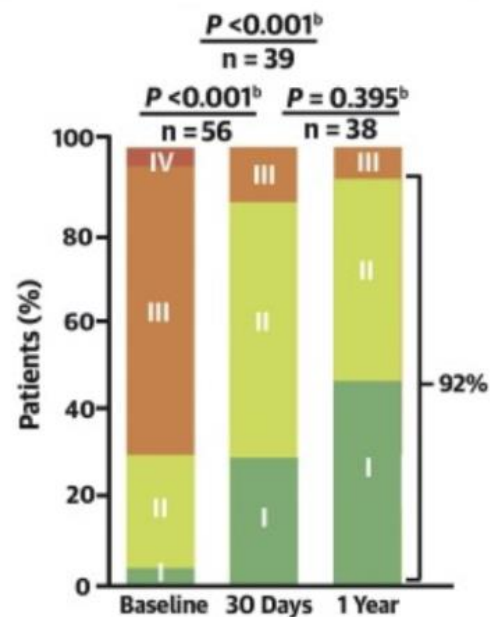
Edwards PASCAL TrAnScatheter Valve RePair System in Tricuspid Regurgitation [CLASP TR] Early Feasibility Study



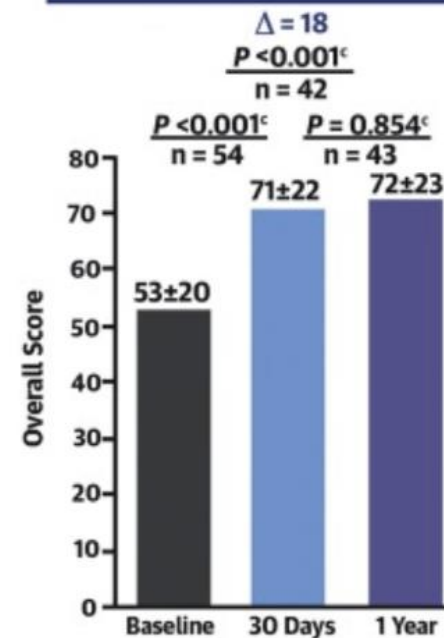
TR Severity by Core Lab^a



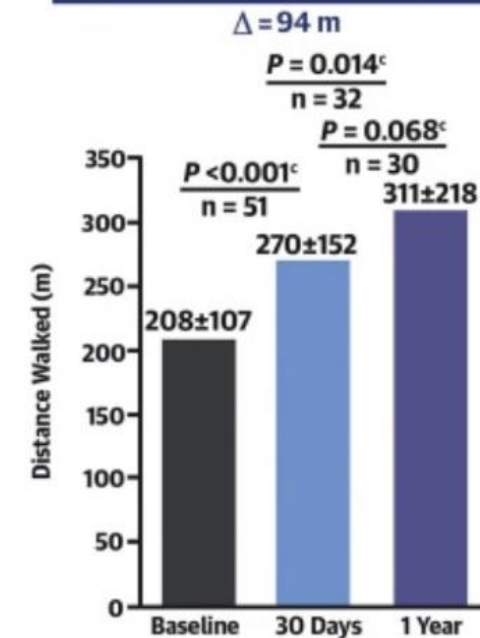
NYHA Functional Class



Overall KCCQ Score

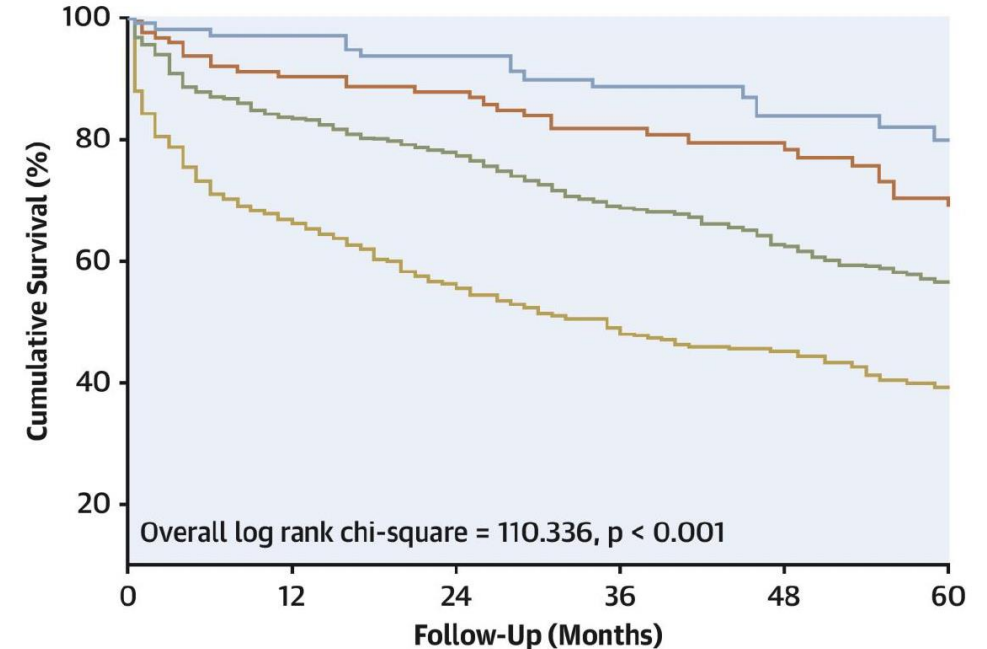
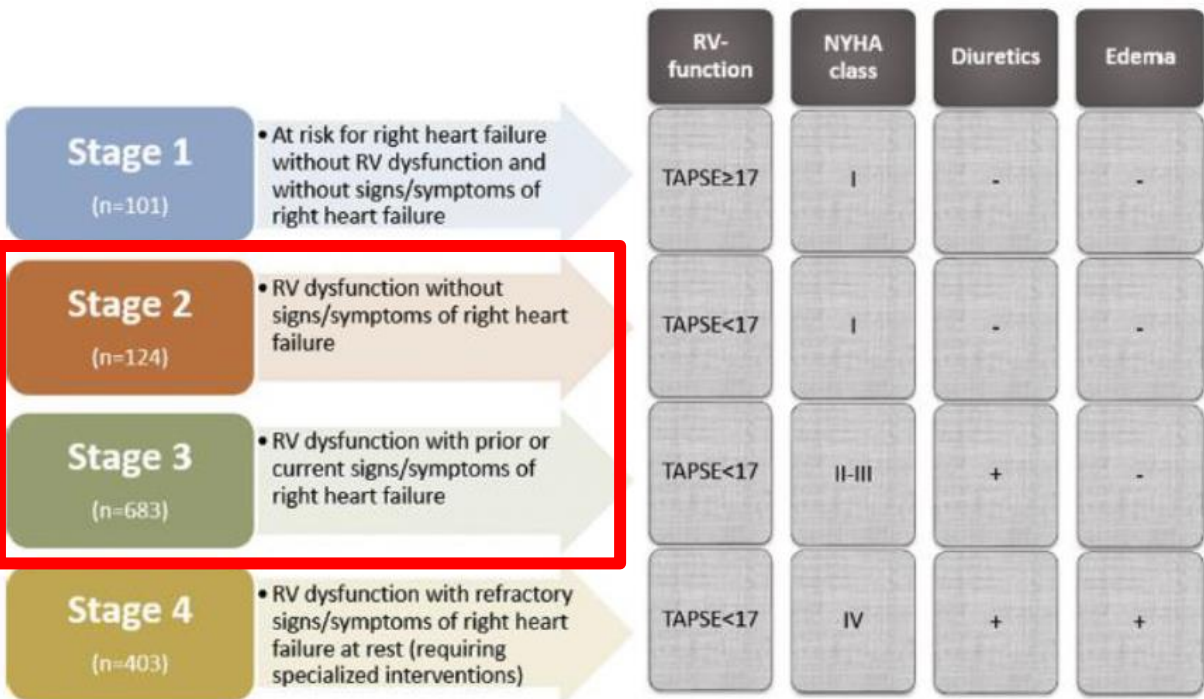


6-Minute Walk Distance



SECONDARY TR

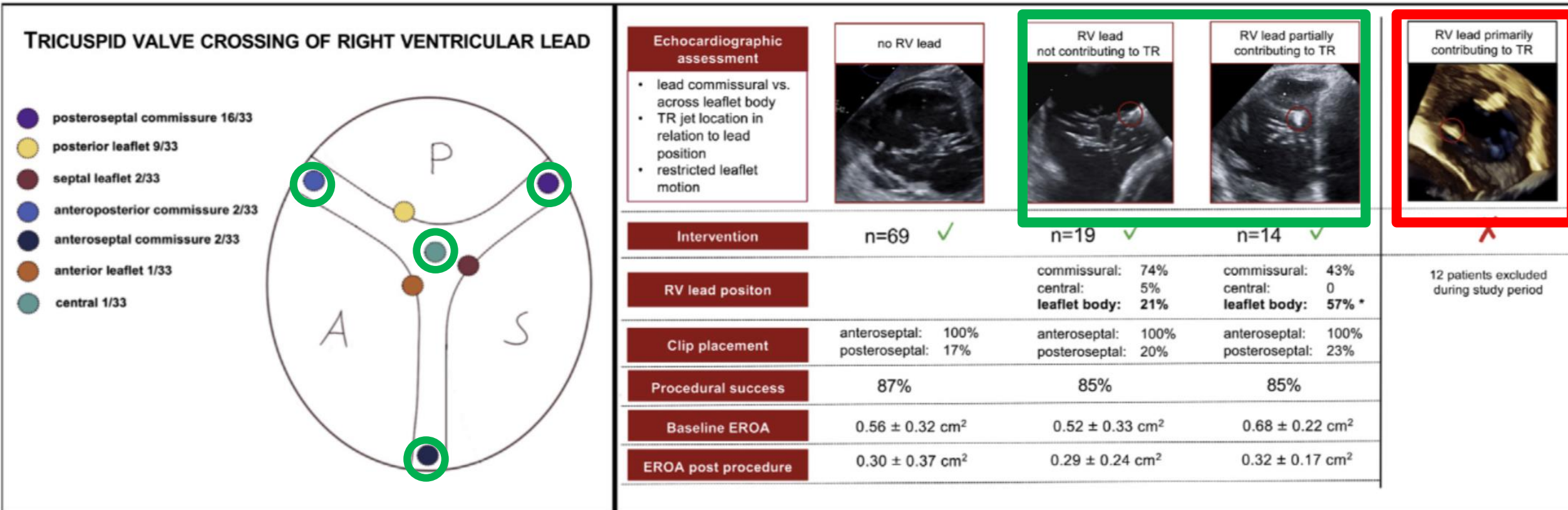
CENTRAL ILLUSTRATION: Kaplan-Meier Curves for Survival According to Stages of Right Heart Failure

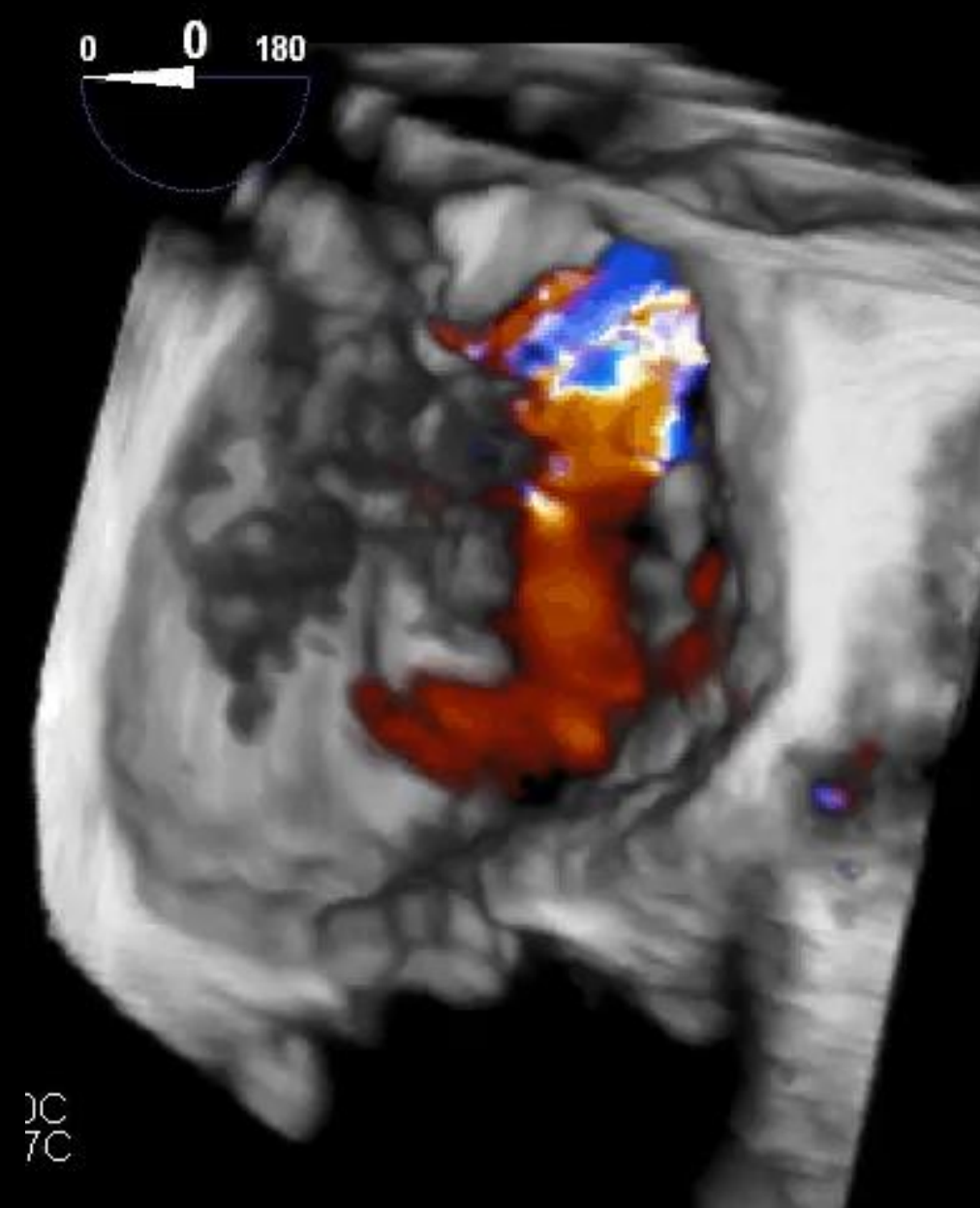


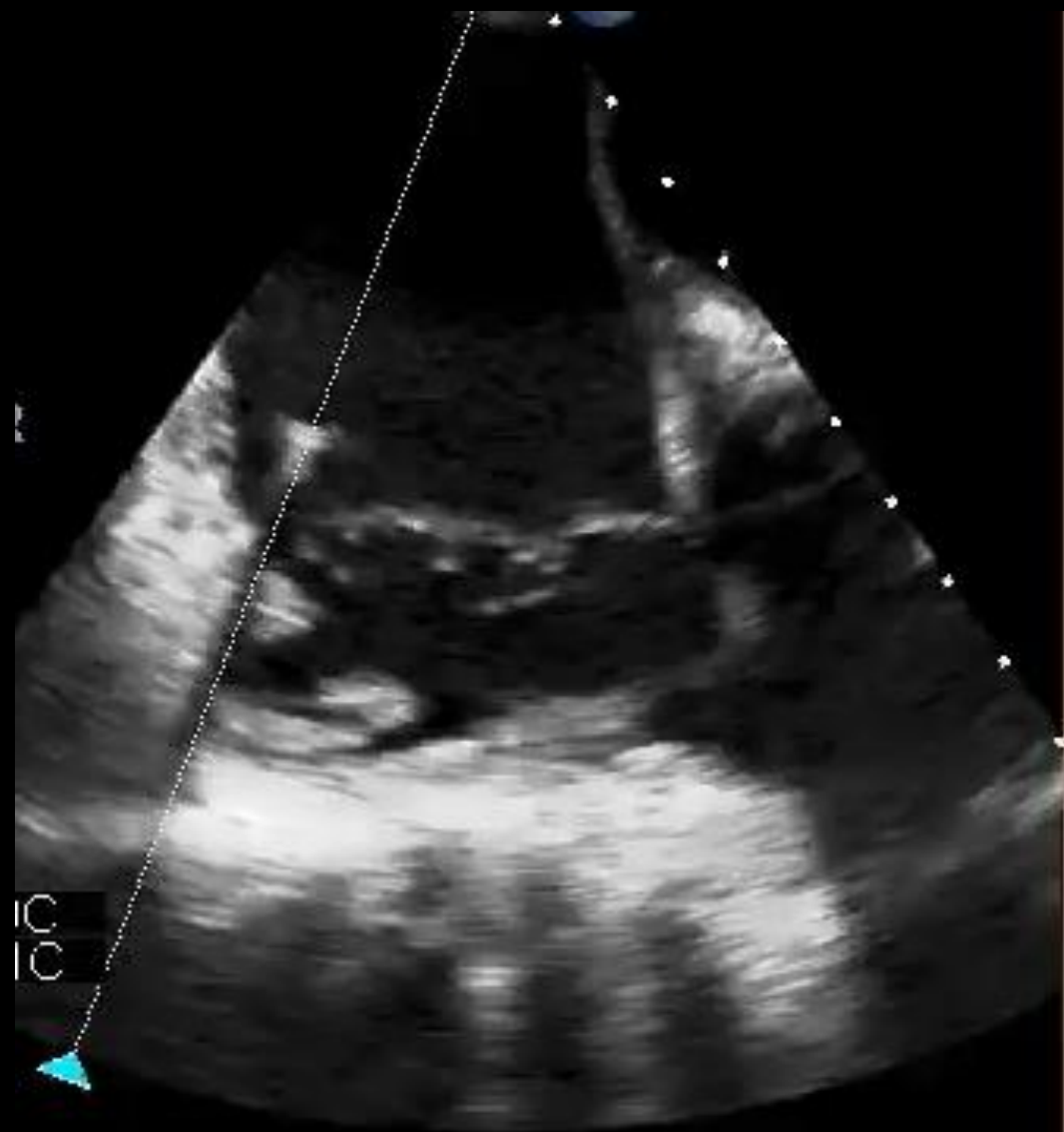
Number at risk	0	12	24	36	48	60
— Stage 1	101	94	79	63	48	41
— Stage 2	124	110	96	77	63	51
— Stage 3	683	566	472	356	268	202
— Stage 4	403	266	197	146	111	77

TR and electronic device leads

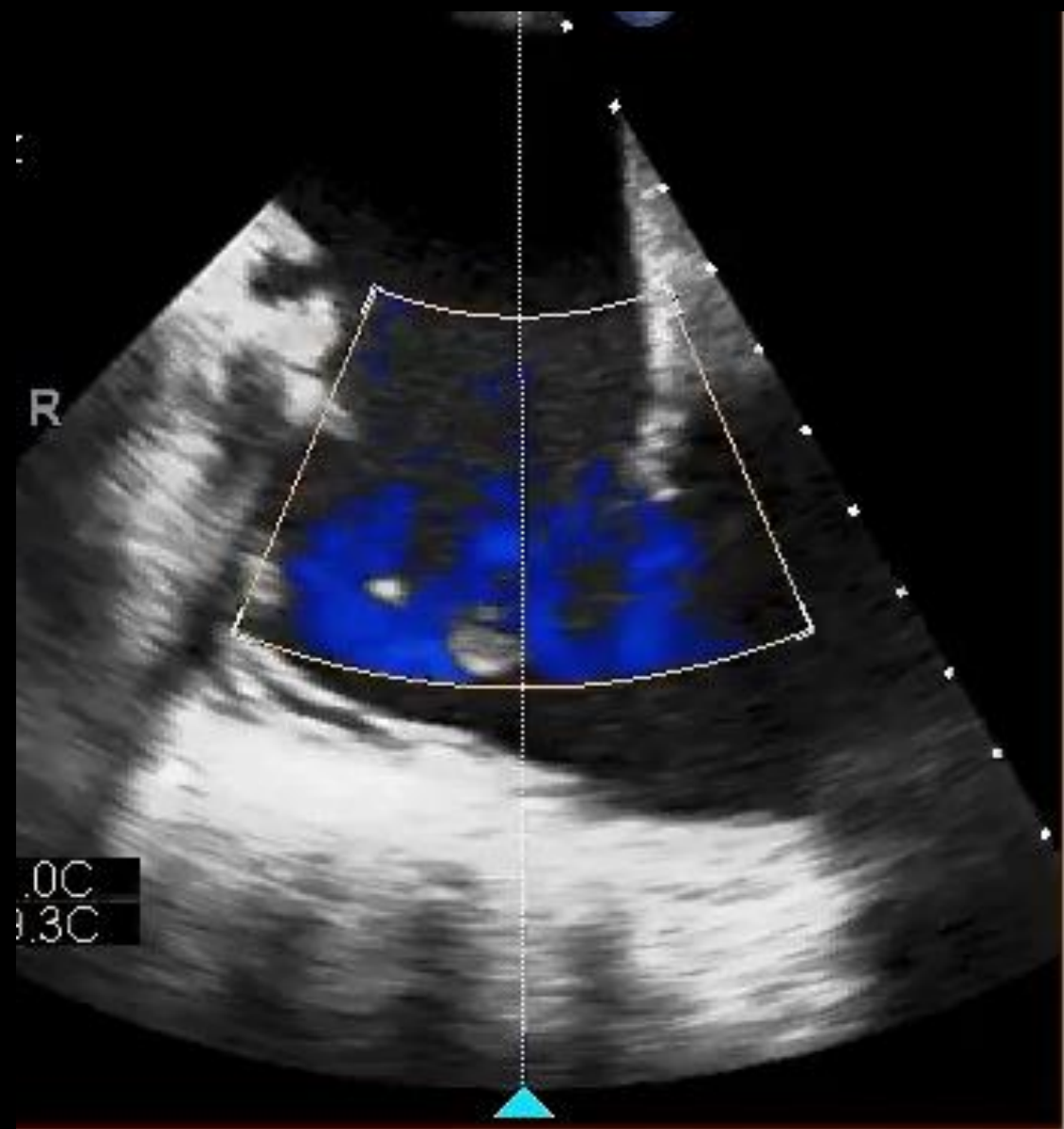
FIGURE 1 Anatomic, Interventional, and Echocardiographic Details



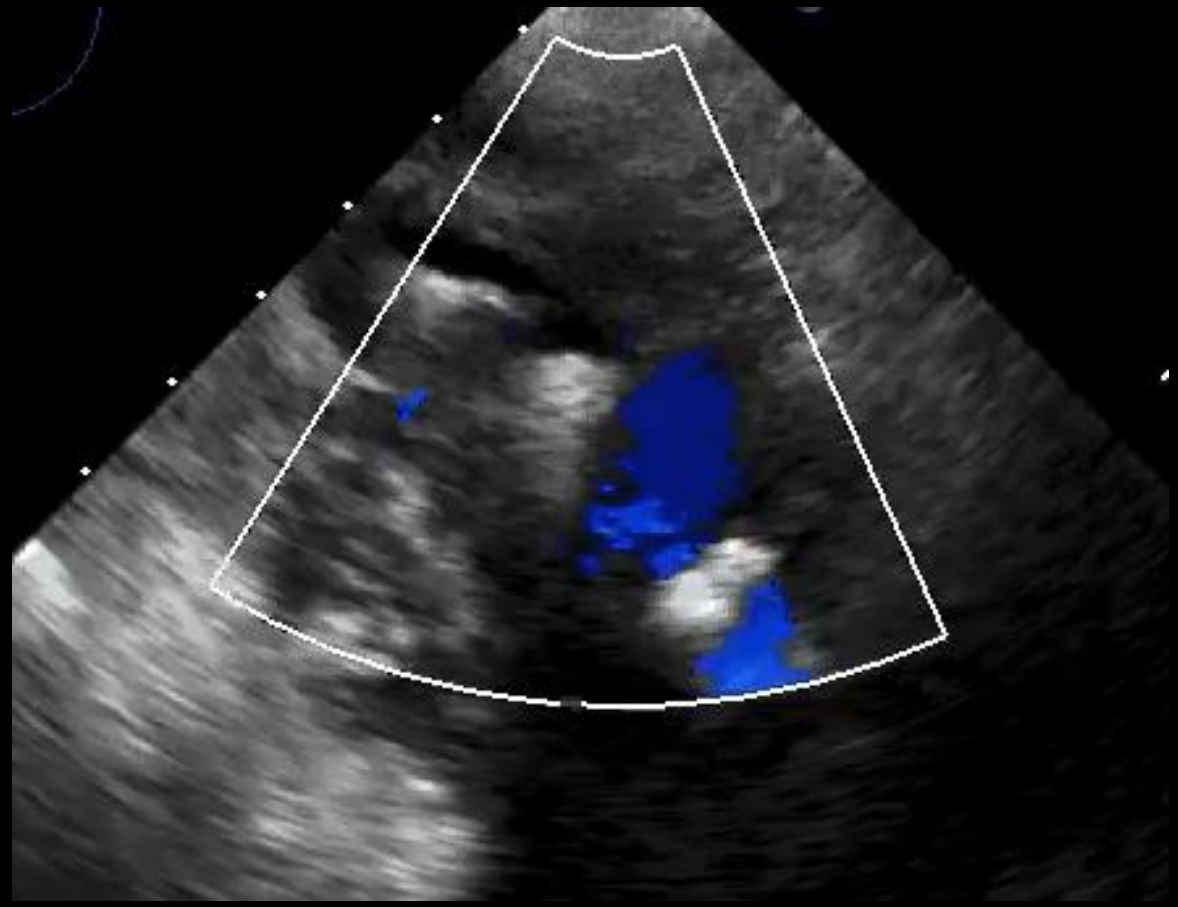
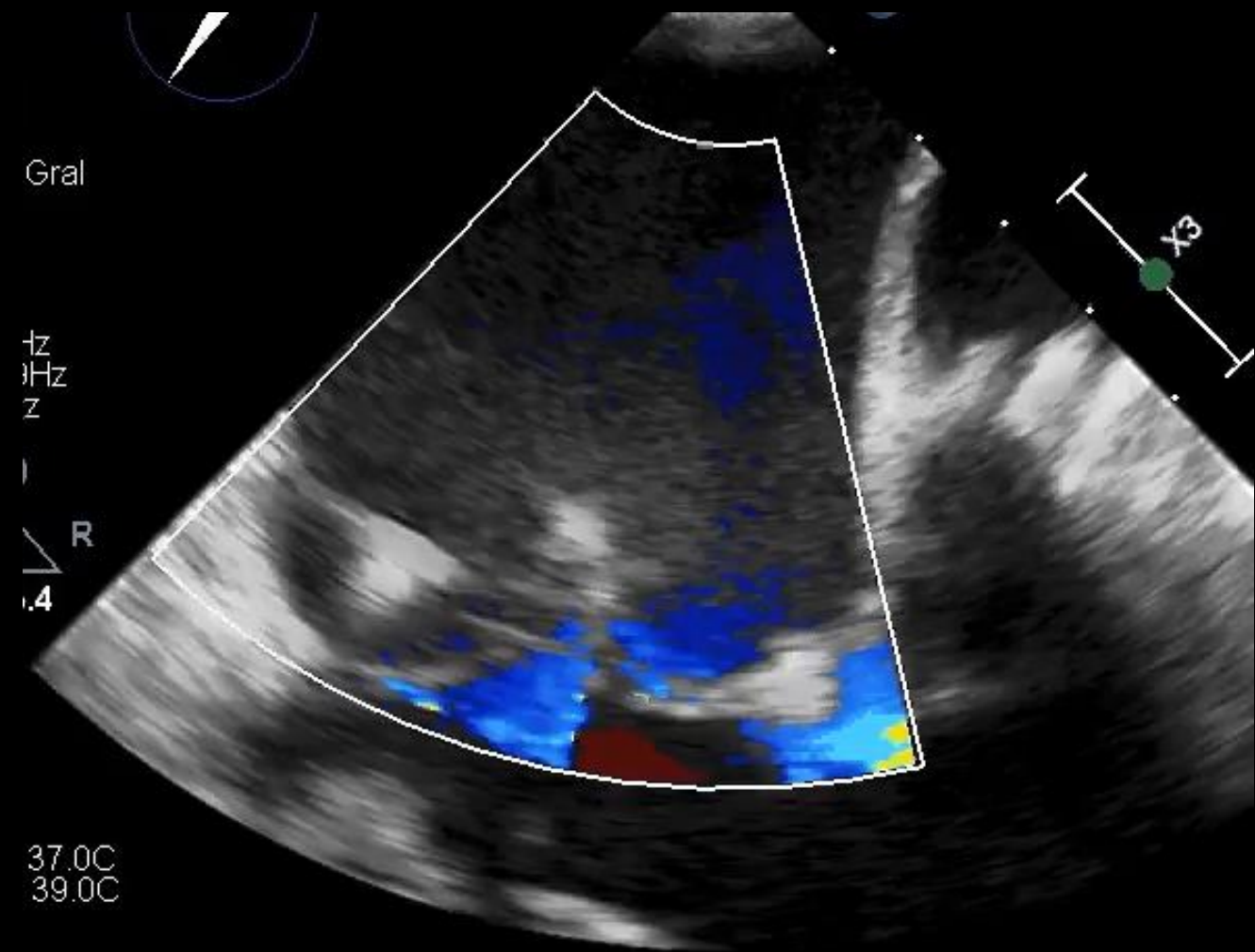




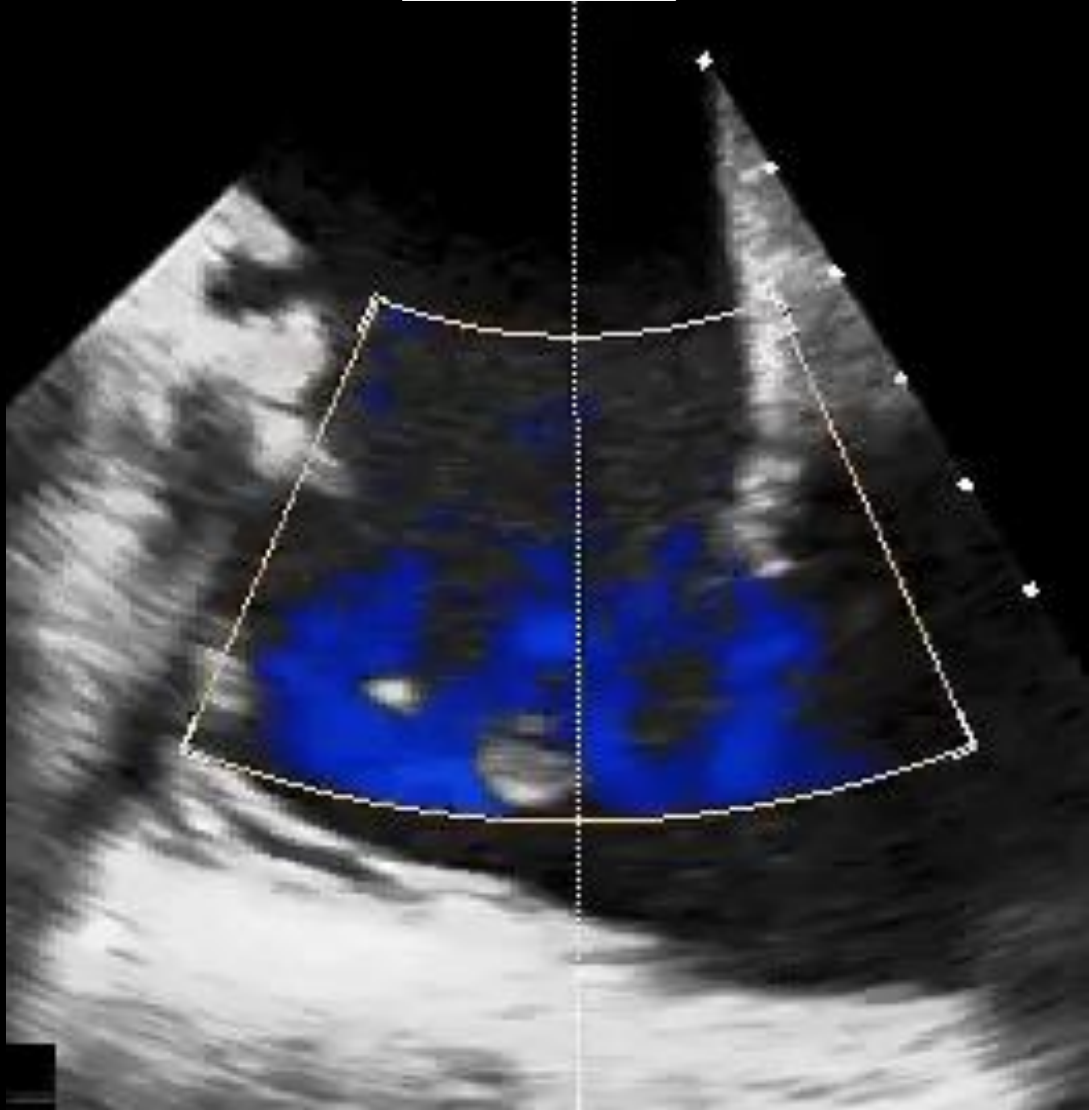
65 lpr



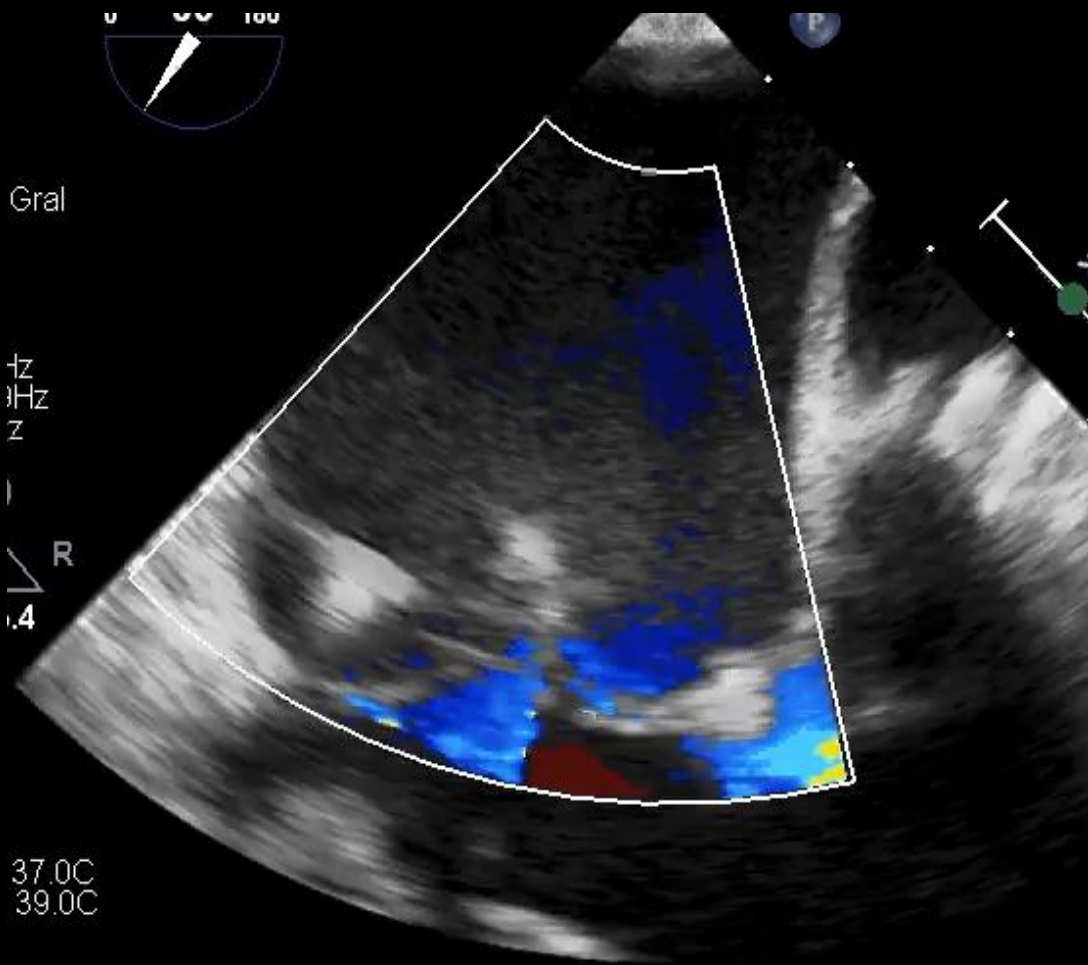
POST XTW + XT



PRE-CLIP



POST XTW + XT



6

Take Home

1

M-TEER is the treatment of choice for FMR in association with OMT.

1

M-TEER is the treatment of choice for FMR in association with OMT.

2

M-TEER for DMR with high / prohibitive surgical risk.

1 M-TEER is the treatment of choice for FMR in association with OMT.

2 M-TEER for DMR with high / prohibitive surgical risk.

3 M-TEER is a secure and effective solution for severe MR shortly after MI.

1

M-TEER is the treatment of choice for FMR in association with OMT.

2

M-TEER for DMR with high / prohibitive surgical risk.

3

M-TEER is a secure and effective solution for severe MR shortly after MI.

4

T-TEER is an option for selected and symptomatic patients.