

Liderando el conocimiento del mañana

Cardio**Advanced**Forum

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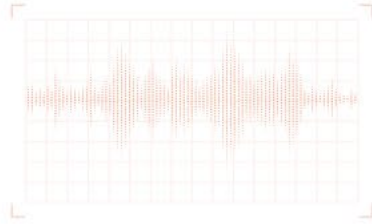
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Valvulopatías: Toma de decisiones complejas

Insuficiencia mitral severa

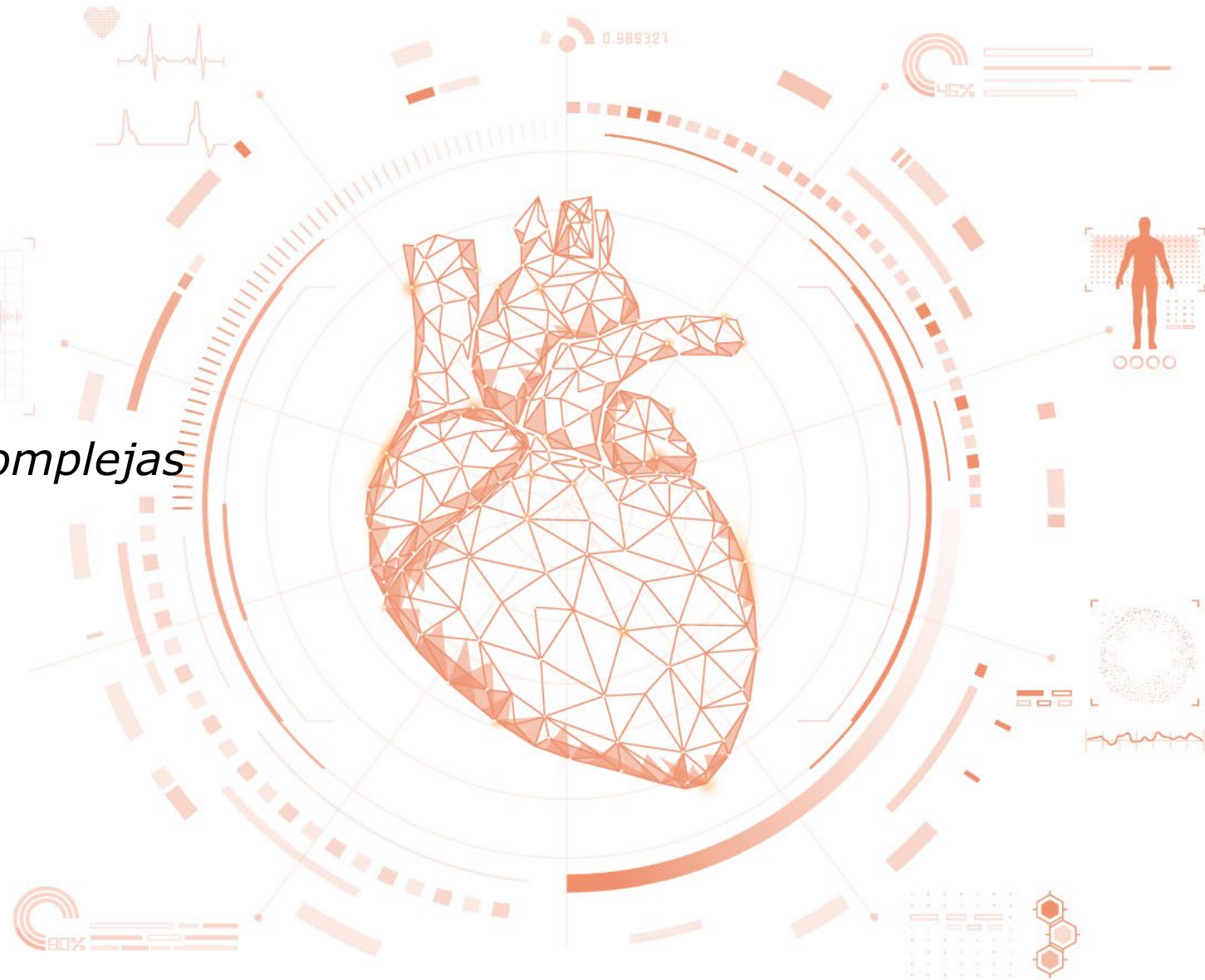
¿Cirugía o tratamiento percutáneo?



Valvulopatías: Toma de decisiones complejas

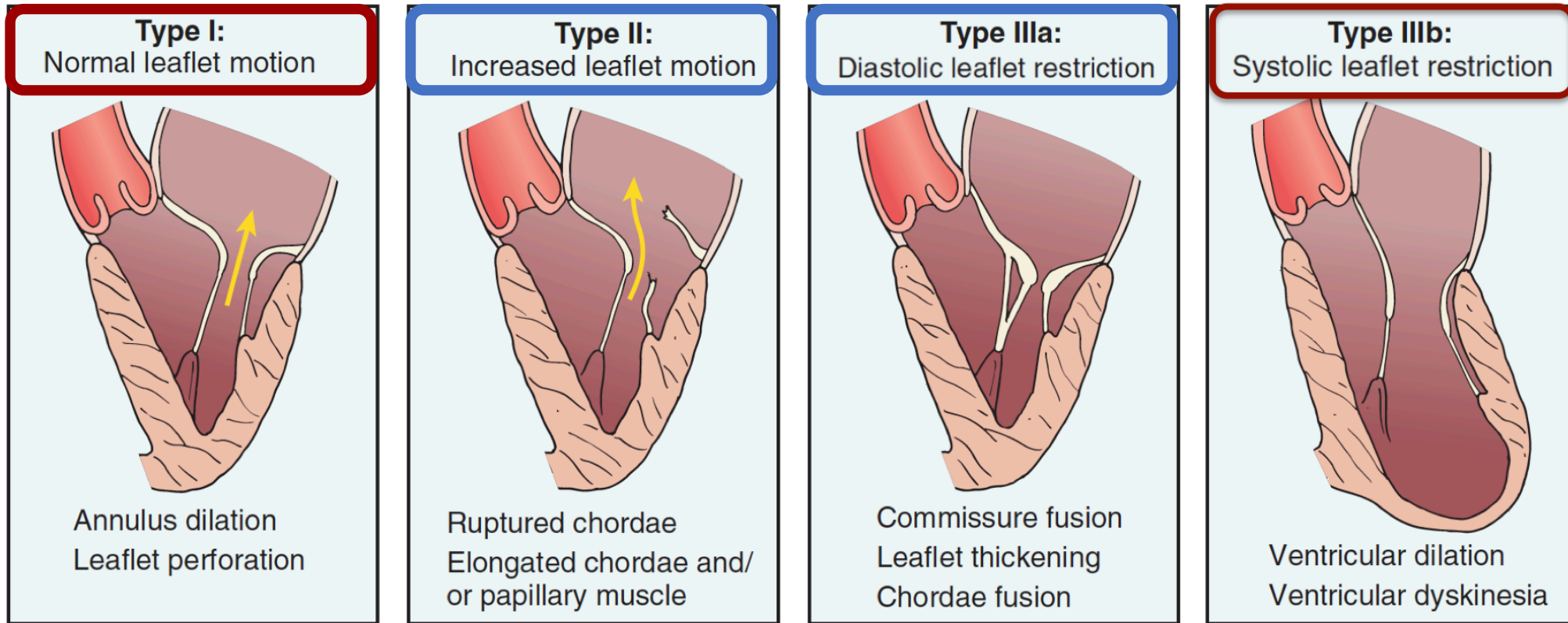
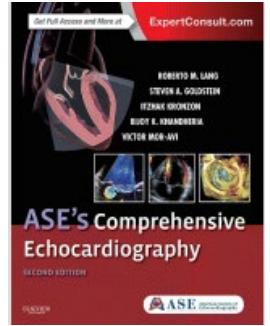
Insuficiencia mitral severa

¿Cirugía o tratamiento percutáneo?

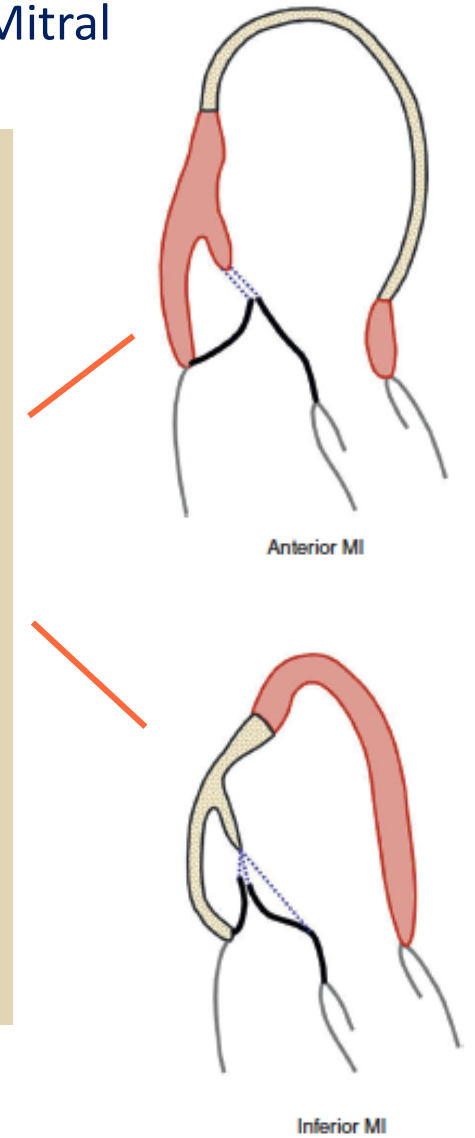
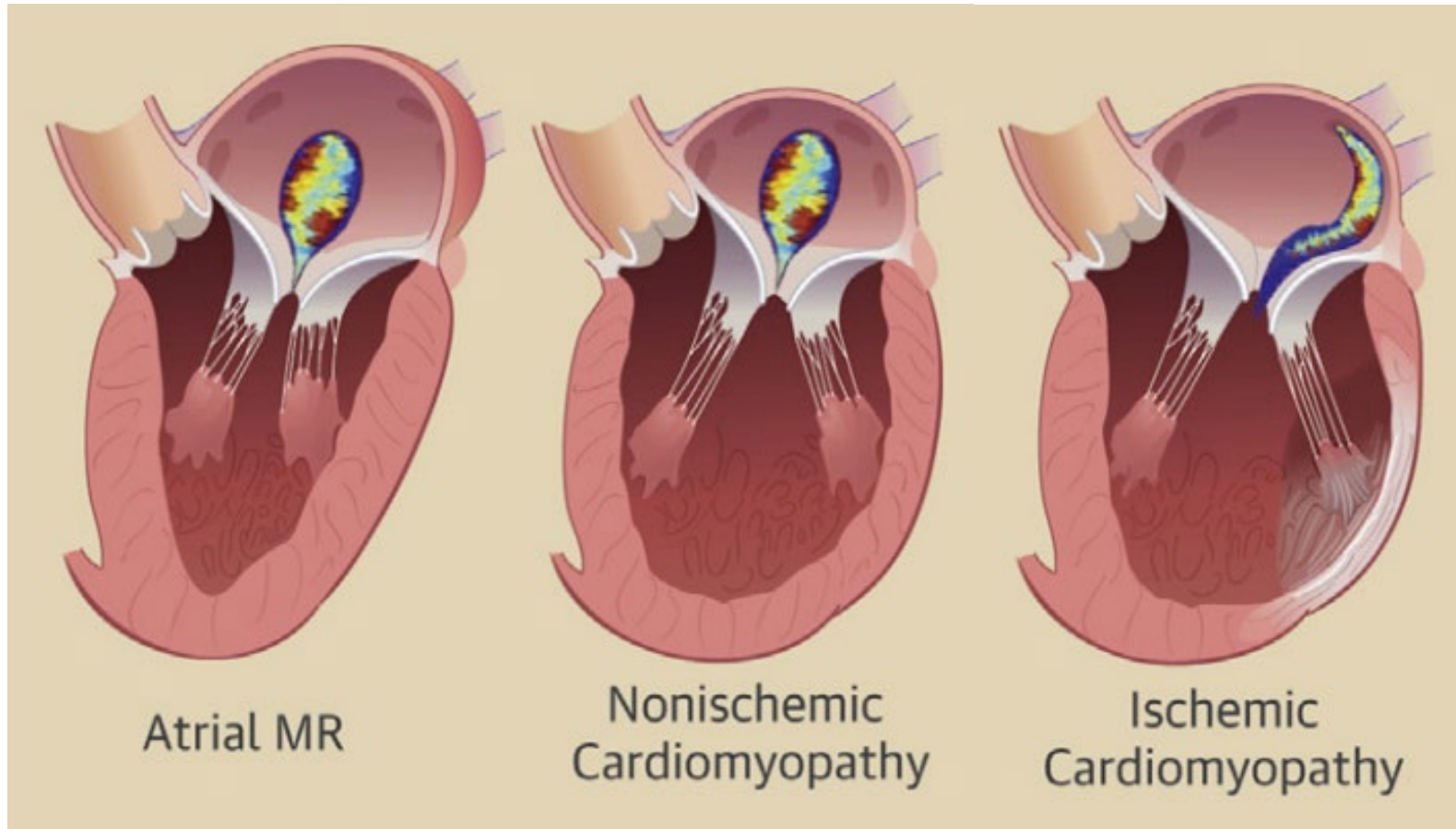


114 Etiologies and Mechanisms of Mitral Valve Dysfunction

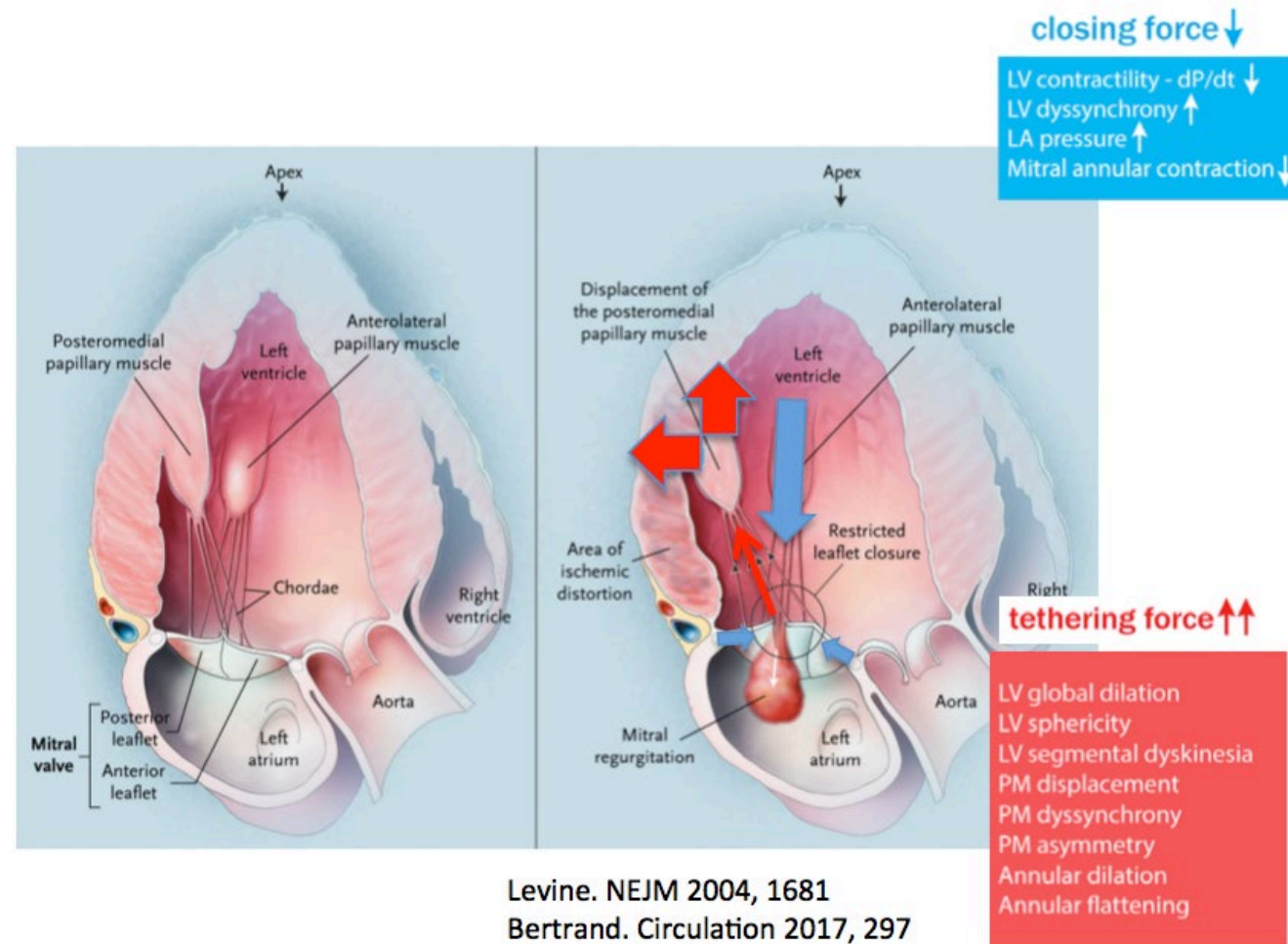
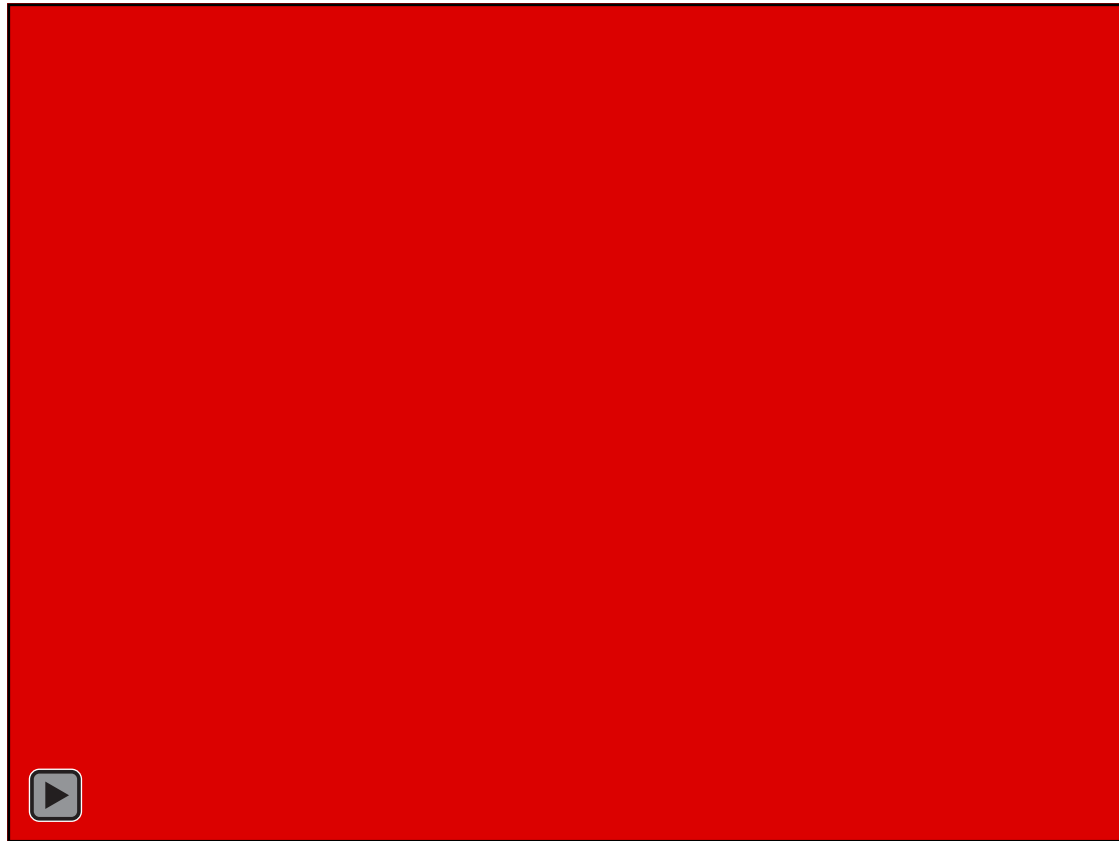
Benjamin H. Freed, MD, Wendy Tsang, MD, MS, Roberto M. Lang, MD



IM SECUNDARIA / FUNCIONAL: Enfermedad del Ventrículo (Aurícula) NO de la Válvula Mitral



ENFERMEDAD DEL VENTRÍCULO IZQUIERDO NO DE LA VÁLVULA MITRAL



Randomized Comparison of Percutaneous Repair and Surgery for Mitral Regurgitation

5-Year Results of EVEREST II

JACC 2015, 2844–54

The NEW ENGLAND
JOURNAL of MEDICINE

ESTABLISHED IN 1812

APRIL 14, 2011

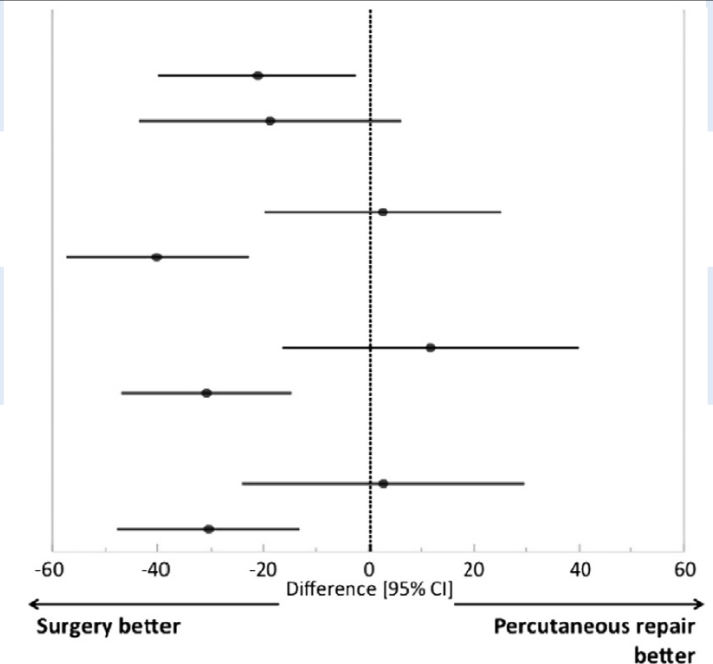
VOL. 364 NO. 15

Percutaneous Repair or Surgery for Mitral Regurgitation

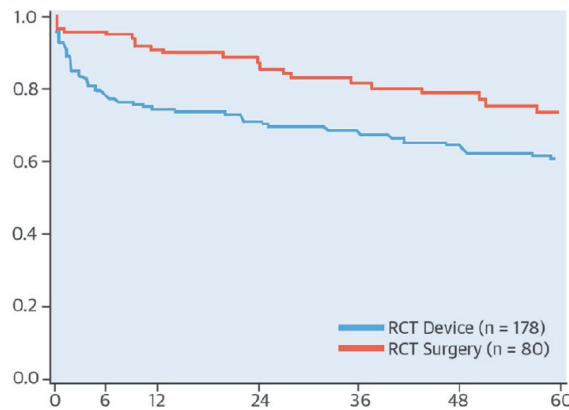
Ted Feldman, M.D., Elyse Foster, M.D., Donald D. Glower, M.D., Saibal Kar, M.D., Michael J. Rinaldi, M.D., Peter S. Fail, M.D., Richard W. Smalling, M.D., Ph.D., Robert Siegel, M.D., Geoffrey A. Rose, M.D., Eric Engoron, M.D., Catalin Loghin, M.D., Alfredo Trento, M.D., Eric R. Skipper, M.D., Tommy Fudge, M.D., George V. Letsou, M.D., Joseph M. Massaro, Ph.D., and Laura Mauri, M.D., for the EVEREST II Investigators*

TABLE 4 Subgroup Analyses for Freedom From Death, MV Surgery or Reoperation, and 3+ or 4+ MR at 5 Years

Subgroup	Percutaneous Repair	Surgery	Difference (95% CI)	p value
Sex				
Male	42.9 (42/98)	63.9 (23/36)	-21.0% (-39.5% to -2.5%)	0.03
Female	46.4 (26/56)	65.0 (13/20)	-18.6% (-43.2% to 6.1%)	0.15
Age				
Age ≥70 yrs	45.1 (32/71)	42.3 (11/26)	2.8% (-19.5% to 25.0%)	0.81
Age <70 yrs	43.4 (36/83)	83.3 (25/30)	-40.0% (-57.0% to -22.9%)	<0.001
Type of MR				
Functional MR	40.5 (17/42)	28.6 (4/14)	11.9% (-16.0% to 39.8%)	0.43
Degenerative MR	45.5 (51/112)	76.2 (32/42)	-30.7% (-46.5% to -14.8%)	<0.001
LVEF				
LVEF <60%	44.1 (26/59)	41.2 (7/17)	2.9% (-23.7% to 29.5%)	0.83
LVEF ≥60%	44.1 (41/93)	74.4 (29/39)	-30.3% (-47.3% to -13.3%)	0.001



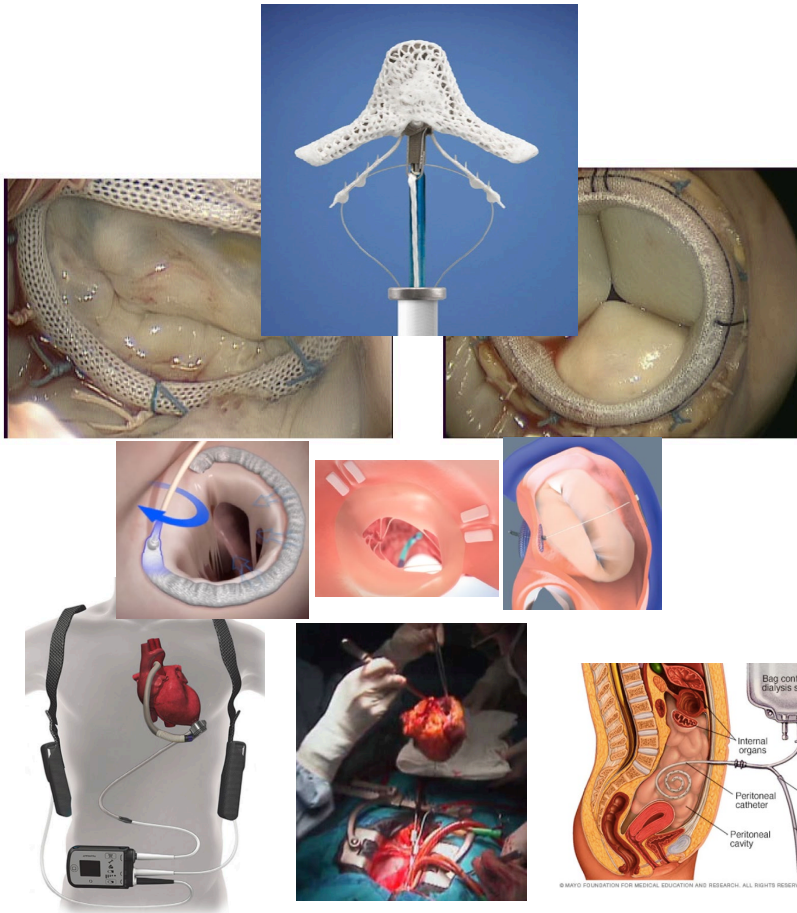
A. Freedom From Death, MV Surgery or Reoperation



Patients At Risk	Months	0	6	12	24	36	48	60
Device Group		178	136	128	117	109	98	45
Control Group		80	75	69	63	54	49	21

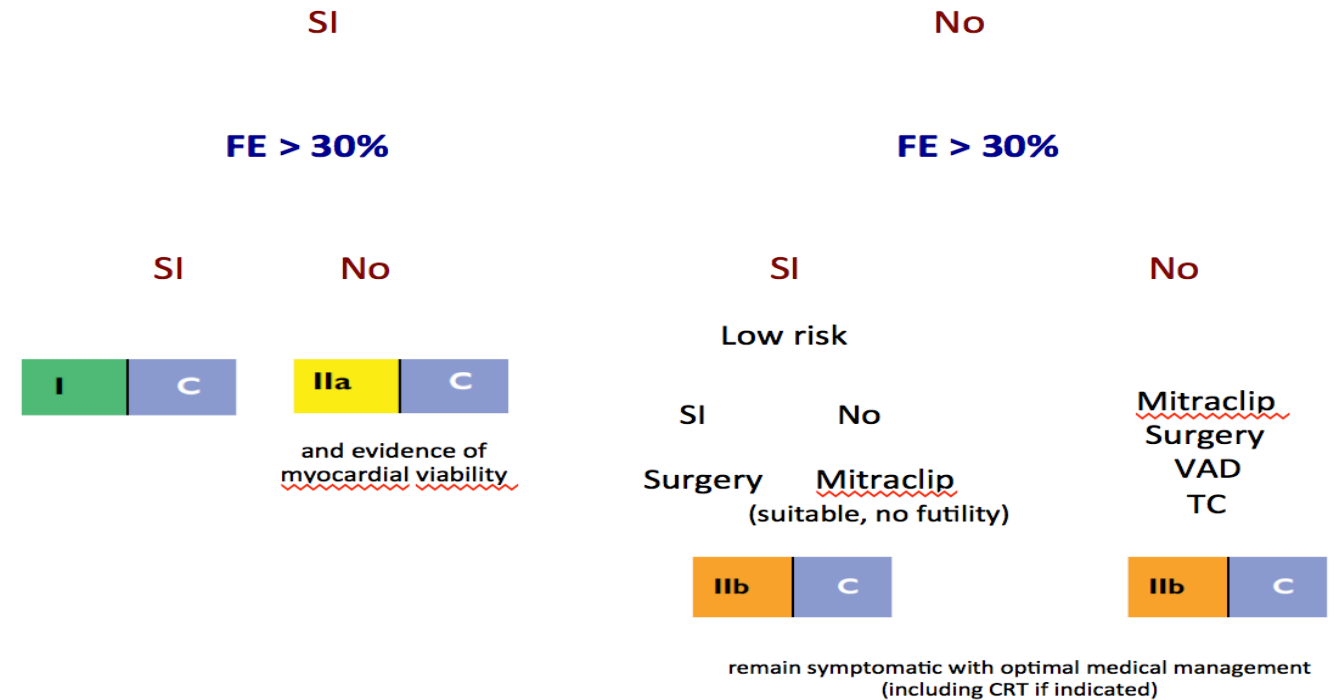
2017 ESC/EACTS Guidelines for the management of valvular heart disease

¿Cirugía valvular mitral o tratamiento percutáneo mitral?



Severe symptomatic Secondary Mitral Regurgitation

CABG/revascularization





ORIGINAL ARTICLE

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

Gregg W. Stone, M.D., William T. Abraham, M.D., JoAnn Lindenfeld, M.D., Saibal Kar, M.D., Paul A. Grayburn, M.D., D. Scott Lim, M.D., Jacob M. Mishell, M.D., Brian Whisenant, M.D., Michael Rinaldi, M.D., Samir R. Kapadia, M.D., Vivek Rajagopal, M.D., Ian J. Sarembock, M.B., Ch.B., M.D., Andreas Brieke, M.D., Steven O. Marx, M.D., David J. Cohen, M.D., M.Sc., Federico M. Asch, M.D., and Michael J. Mack, M.D., for the COAPT Investigators

NEJM. Sept 23, 2018

NEJM. March 5, 2023

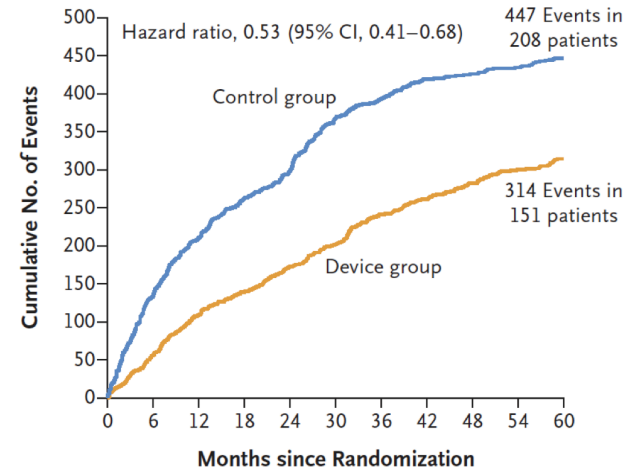
COAPT

Secondary MR (3+) (4+)

EF 20%-50% and LVESD ≤70 mm

NYHA II-III-IV (40 / 50-55/ 5-10)

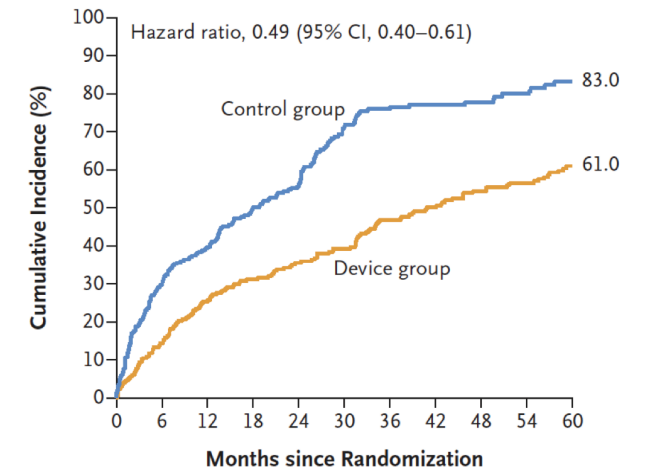
A Hospitalizations for Heart Failure



No. at Risk

Control group	312	272	224	188	156	133	120	106	94	84	59
Device group	302	269	238	219	205	186	167	151	138	124	79

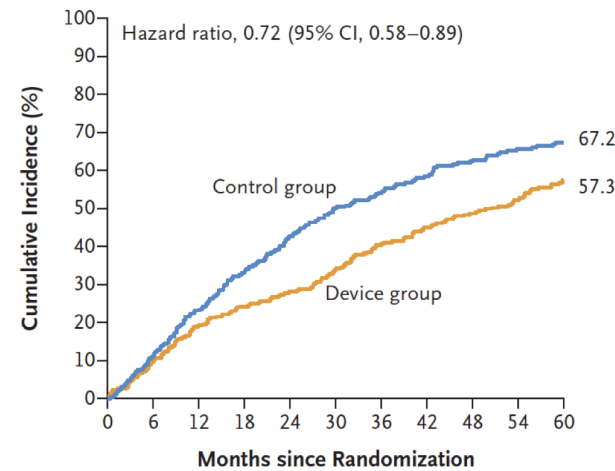
B First Hospitalization for Heart Failure



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

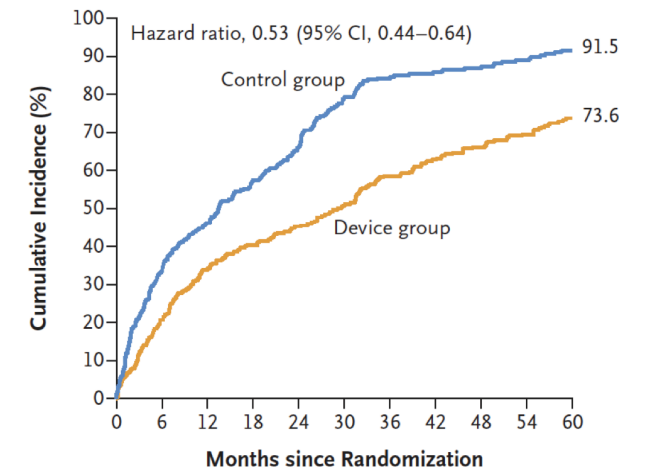
C Death from Any Cause



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

Insuficiencia mitral severa

¿Cirugía o tratamiento percutáneo?

Diagnóstico

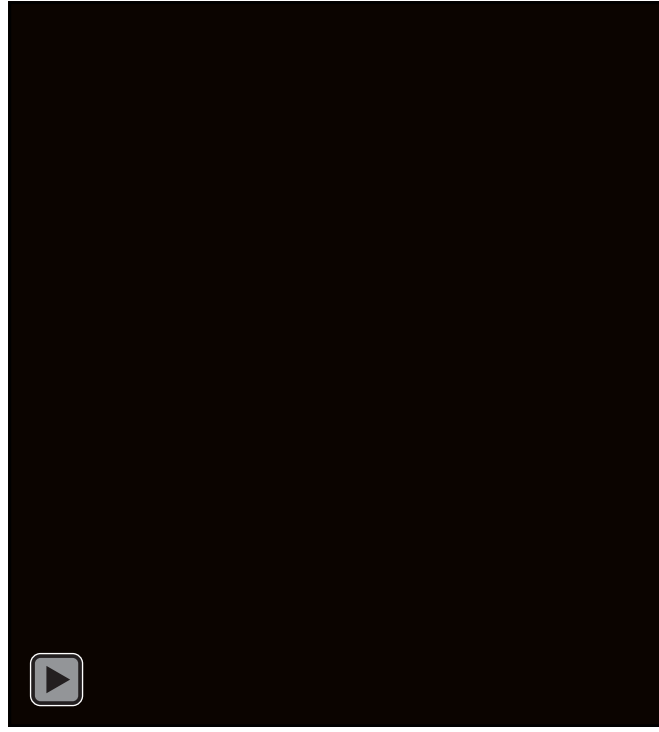
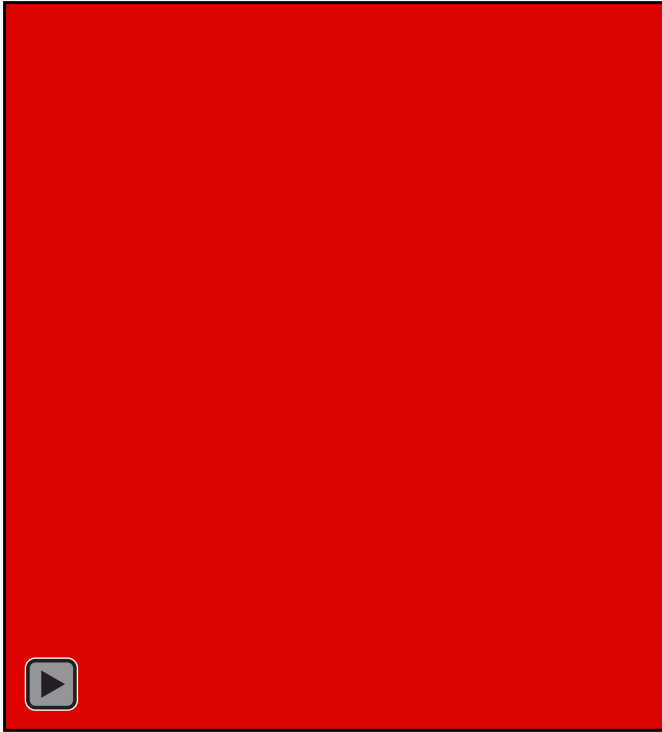
Speckle tracking

Resonancia cardiaca

“ lower thresholds should be explored to identify patients with clinically significant SMR who may require intervention ”.

Recommendation	American	European
Primary MR		
Symptoms	I-B	I-B
No symptoms and		
LVEF $\leq 60\%$ and/or LVESD ≥ 40 mm	I-B	I-B
AF secondary to MR		IIa-B
SPAP at rest > 50 mm Hg		IIa-B
LA dilatation (LAVi ≥ 60 mL/m ² or LAD ≥ 55 mm)		IIa-B
High likelihood of durable <u>repair</u> ($> 95\%$) and expected mortality rate $< 1\%$	IIa-B	
MV surgery if progressive increase in LV size or decrease in EF on > 3 serial imaging studies	IIb-B	
TEER if favorable MV anatomy, severe symptoms (NYHA functional class III or IV), high or prohibitive surgical risk, and no futility	IIa-B	IIb-B

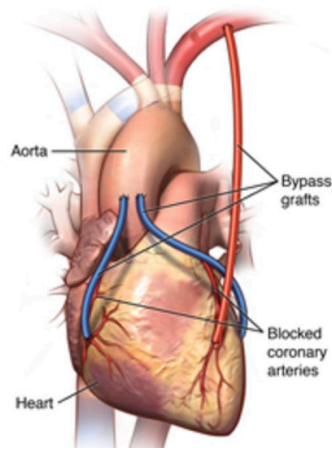
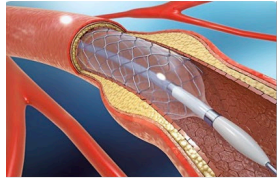
ACC/AHA and ESC/EACTS Guidelines
for the Management of
Valvular Heart Diseases JACC 2023, 721



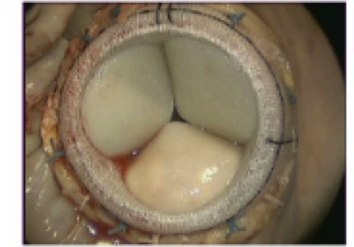
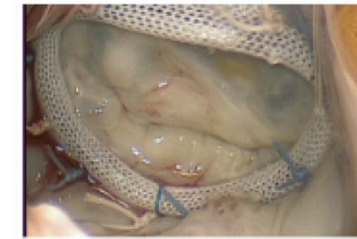
*guideline-directed medical therapy (GDMT)
(including cardiac resynchronization therapy, if indicated)*

Recommendation	American	European
Secondary MR GDMT and management by a collaborative heart team first	I-C	I-B
MV surgery		
In patient undergoing CABG	IIa-B	I-B (and other cardiac surgery)
For ventricular SMR if symptoms despite GDMT	IIb-B	IIb-C (and appropriate for surgery)
For atrial SMR and preserved LVEF if symptoms despite GDMT	IIb-B	
<i>and at low risk of surgery</i>		
TEER		
Symptoms despite optimal GDMT and not eligible for surgery and criteria suggesting an increased chance of responding to TEER		IIa-B
Symptoms despite optimal GDMT and LVEF 20%-50%, LVESD ≤70 mm, SPAP ≤70 mm Hg and appropriate anatomy	IIa-B	
TEER or other transcatheter therapy in high-risk symptomatic patients not eligible for surgery and no criteria suggesting an increased chance of responding to TEER, after careful evaluation for ventricular assist device or heart transplant.		IIb-C

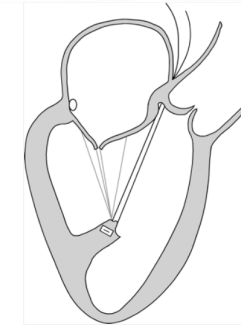
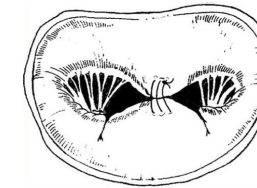
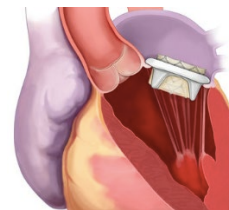
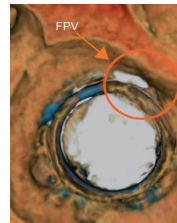
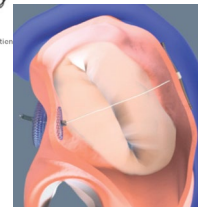
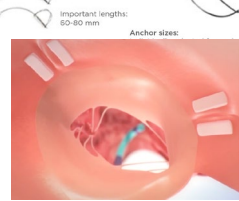
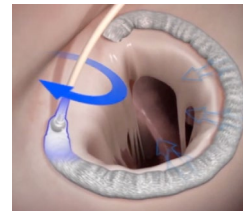
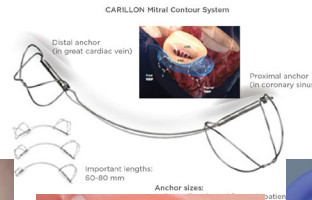
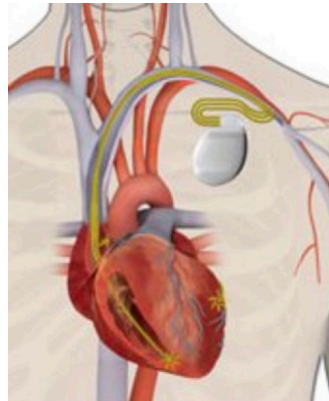
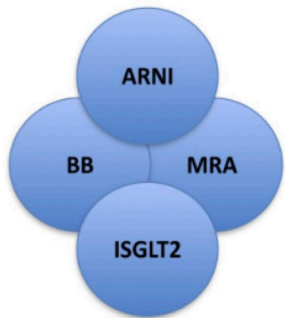
**ACC/AHA and ESC/EACTS Guidelines
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Valvular Heart Diseases** JACC 2023, 721



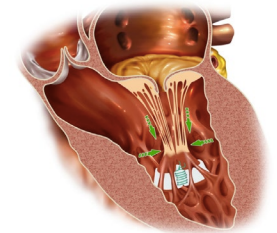
Insuficiencia mitral secundaria ICC con fracción de eyección reducida



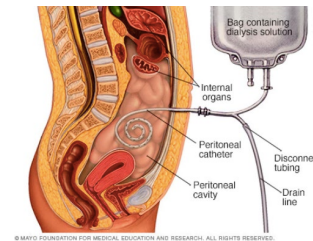
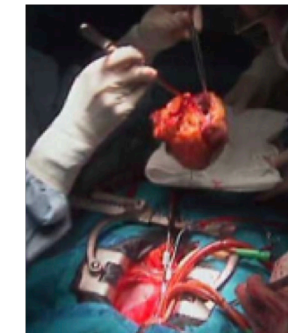
Severidad y mecanismo (anatomía factible)
Comorbilidad cardíaca y extracardiaca



"RING + STRING"



"RING + SLING"



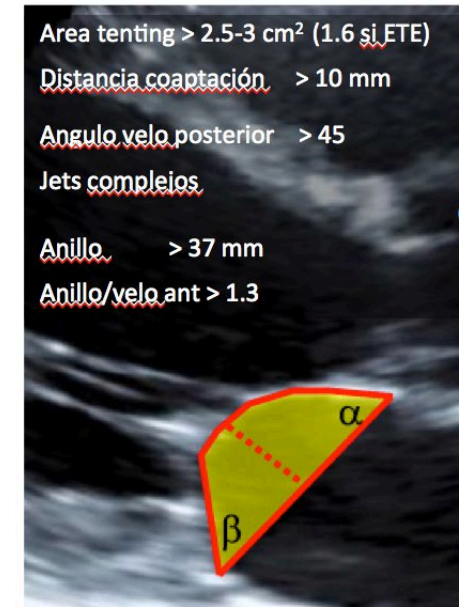
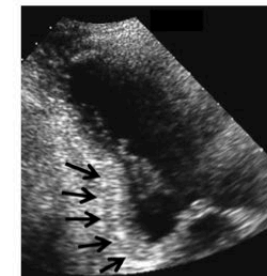
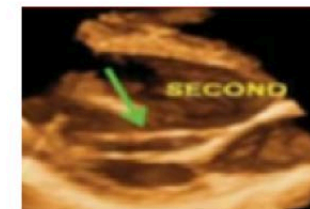
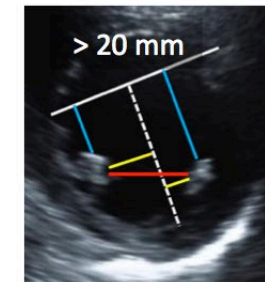
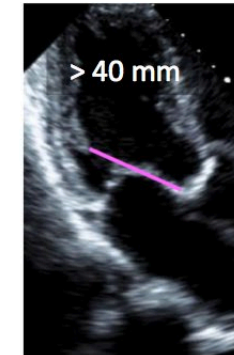
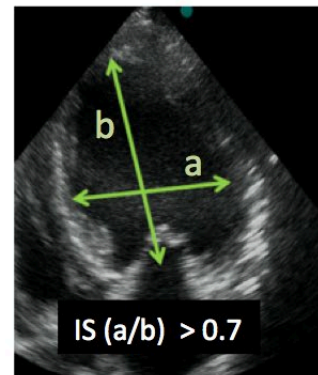
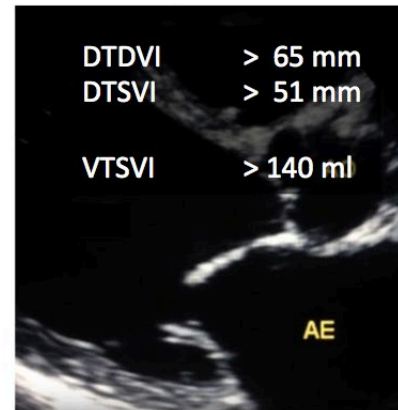
2017 ACC Expert Consensus Decision Pathway on the Management of Mitral Regurgitation

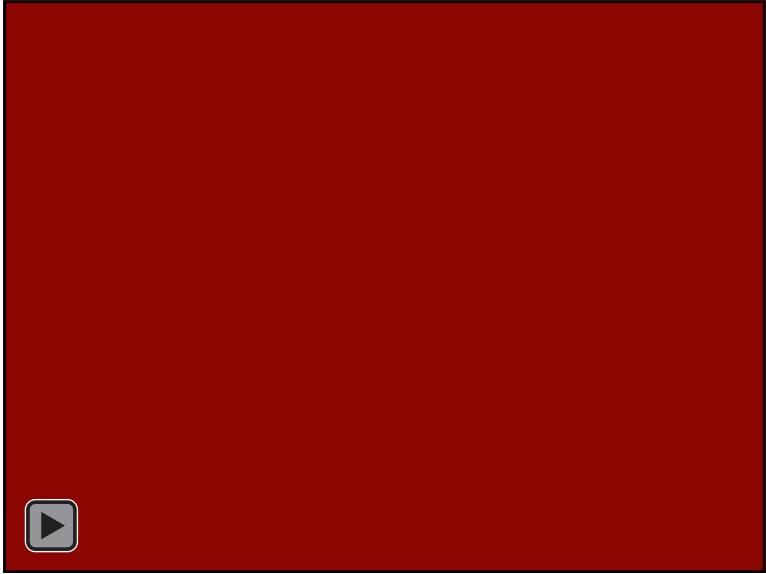
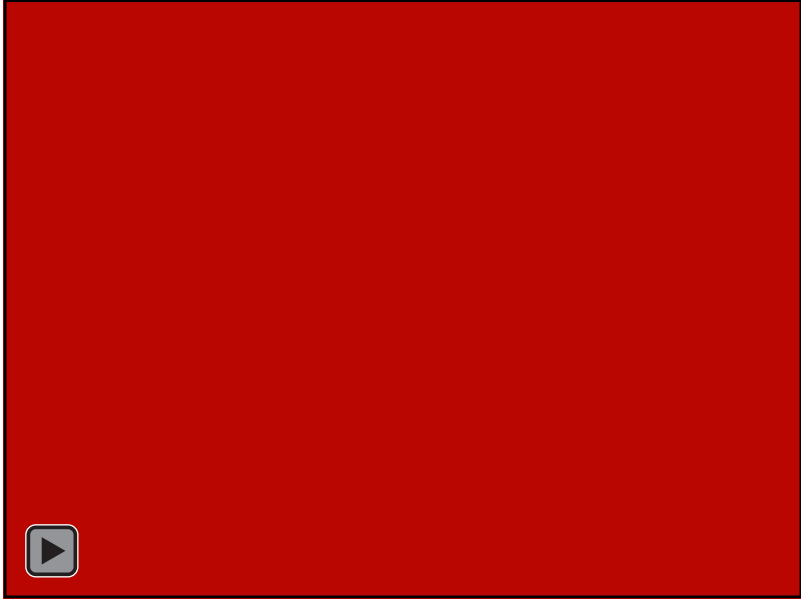
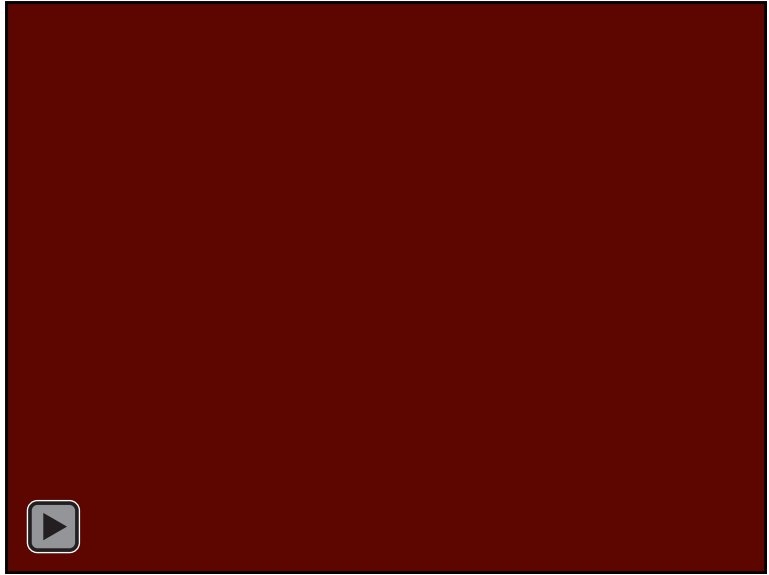
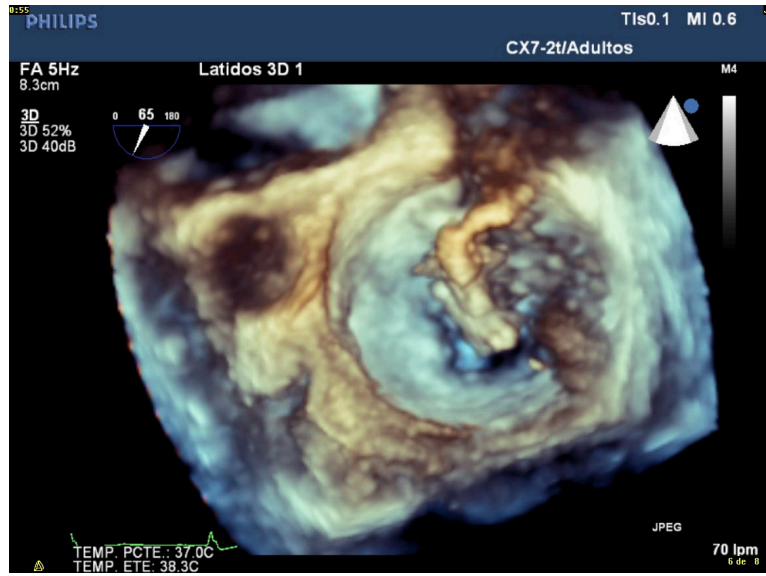
TABLE 6 Feasibility of Transcatheter Edge-to-Edge Clip Repair

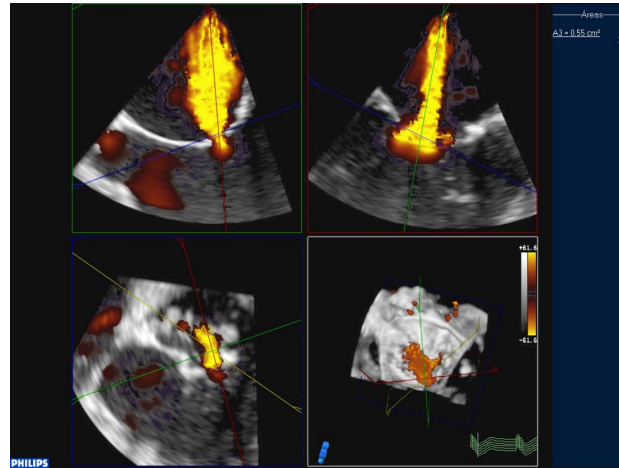
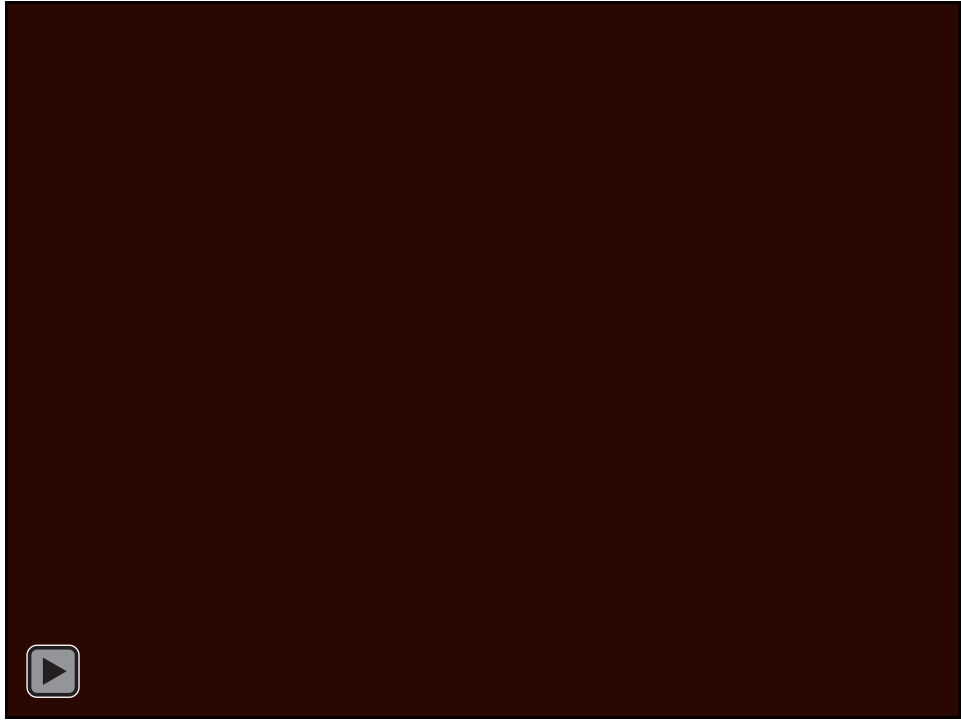
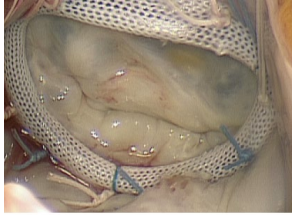
	Ideal Echo Features	Challenging Echo Features	Relative Echo Contraindications
Location of pathology	<ul style="list-style-type: none"> ■ Segment 2 	<ul style="list-style-type: none"> ■ Segments 1 or 3 	<ul style="list-style-type: none"> ■ Body of leaflet (i.e., perforation or cleft/ deep fold)
Calcification	<ul style="list-style-type: none"> ■ None 	<ul style="list-style-type: none"> ■ Mild, outside grasping zone ■ Extensive annular calcification 	<ul style="list-style-type: none"> ■ Severe calcification at site of grasping zone
Mitral valve area/gradient	<ul style="list-style-type: none"> ■ $>4 \text{ cm}^2$ ■ $\leq 4 \text{ mm Hg}$ 	<ul style="list-style-type: none"> ■ >3.5 and $<4 \text{ cm}^2$ with small BSA or very mobile leaflets ■ $\geq 4 \text{ mm Hg}$ 	<ul style="list-style-type: none"> ■ $<4.0 \text{ cm}^2$ ■ $>5 \text{ mm Hg}$ Especially if severe MAC
Grasping zone Length	<ul style="list-style-type: none"> ■ $>10 \text{ mm}$ 	<ul style="list-style-type: none"> ■ 7-10 mm 	<ul style="list-style-type: none"> ■ $<7 \text{ mm}$
Functional MR	<ul style="list-style-type: none"> ■ Normal thickness and mobility ■ Coaptation depth $<11 \text{ mm}$ 	<ul style="list-style-type: none"> ■ Carpentier IIIB (restricted) ■ Coaptation depth $>11 \text{ mm}$ 	<ul style="list-style-type: none"> ■ Carpentier IIIA (rheumatic thickening and restriction)
Degenerative MR	<ul style="list-style-type: none"> ■ Flail width $<15 \text{ mm}$ ■ Flail gap $<10 \text{ mm}$ ■ Leaflet separation $<2 \text{ mm}$ 	<ul style="list-style-type: none"> ■ Flail width $<15 \text{ mm}$ with large valve area and option for >1 MitraClip ■ Flail gap $>10 \text{ mm}$ with possibility of adjunctive measures 	<ul style="list-style-type: none"> ■ Barlow's disease with significant regurgitation in segments 1-3
Other pathology		<ul style="list-style-type: none"> ■ Annuloplasty ring with adequate mitral valve area and leaflet length ■ HOCM with systolic anterior motion ■ Extreme disease (markedly dilated annulus or EROA $\geq 70.8 \text{ mm}^2$) 	

Predictores de fracaso en la reparación quirúrgica de IM funcional

Parameters	Cut point
Leaflet tethering parameters	
Posterior mitral leaflet angle	>45°
Anterior mitral leaflet angle	>25°
Mitral valve tenting area (cm ²)	≥2.5
Coaptation tenting height (mm)	≥11
Left ventricular remodeling parameters	
LV end-diastolic dimension (mm)	>65
LV end-systolic dimension (mm)	>51
Systolic LV sphericity	>0.7
End-systolic interpapillary muscle distance (mm)	>20
Basal LV aneurysm or dyskinesis	-
Mixed parameter	
LV-MV ring mismatch	Not defined

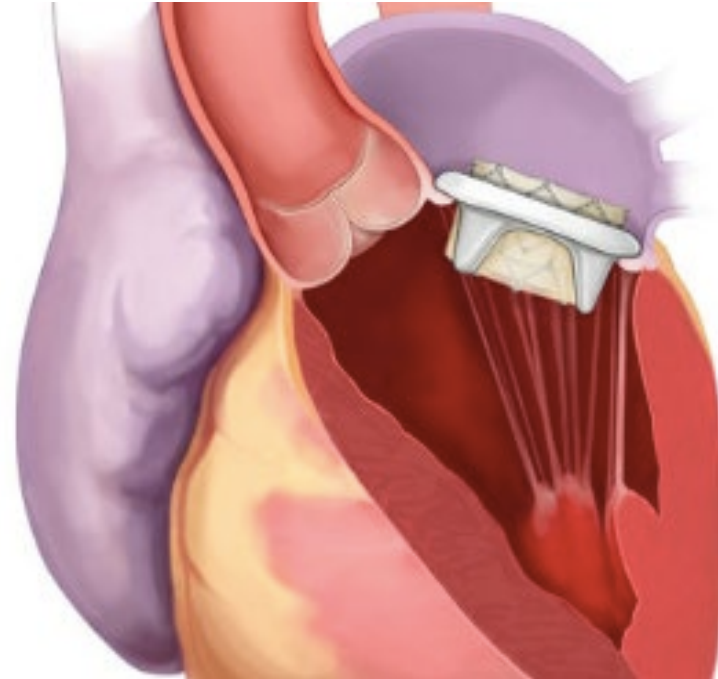
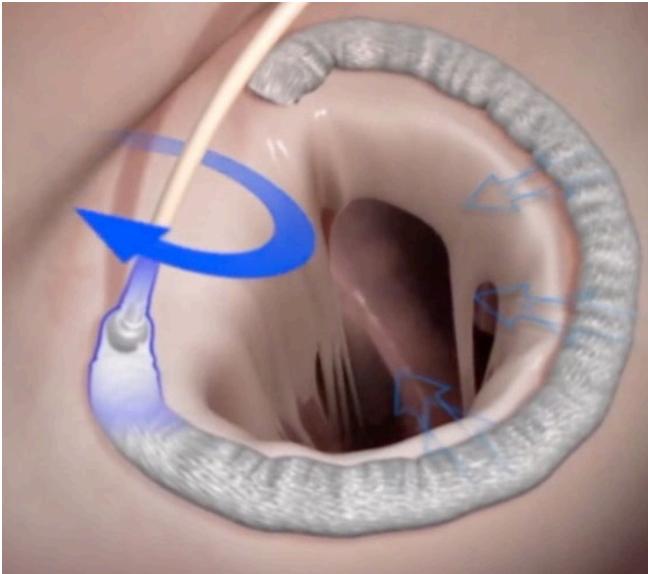


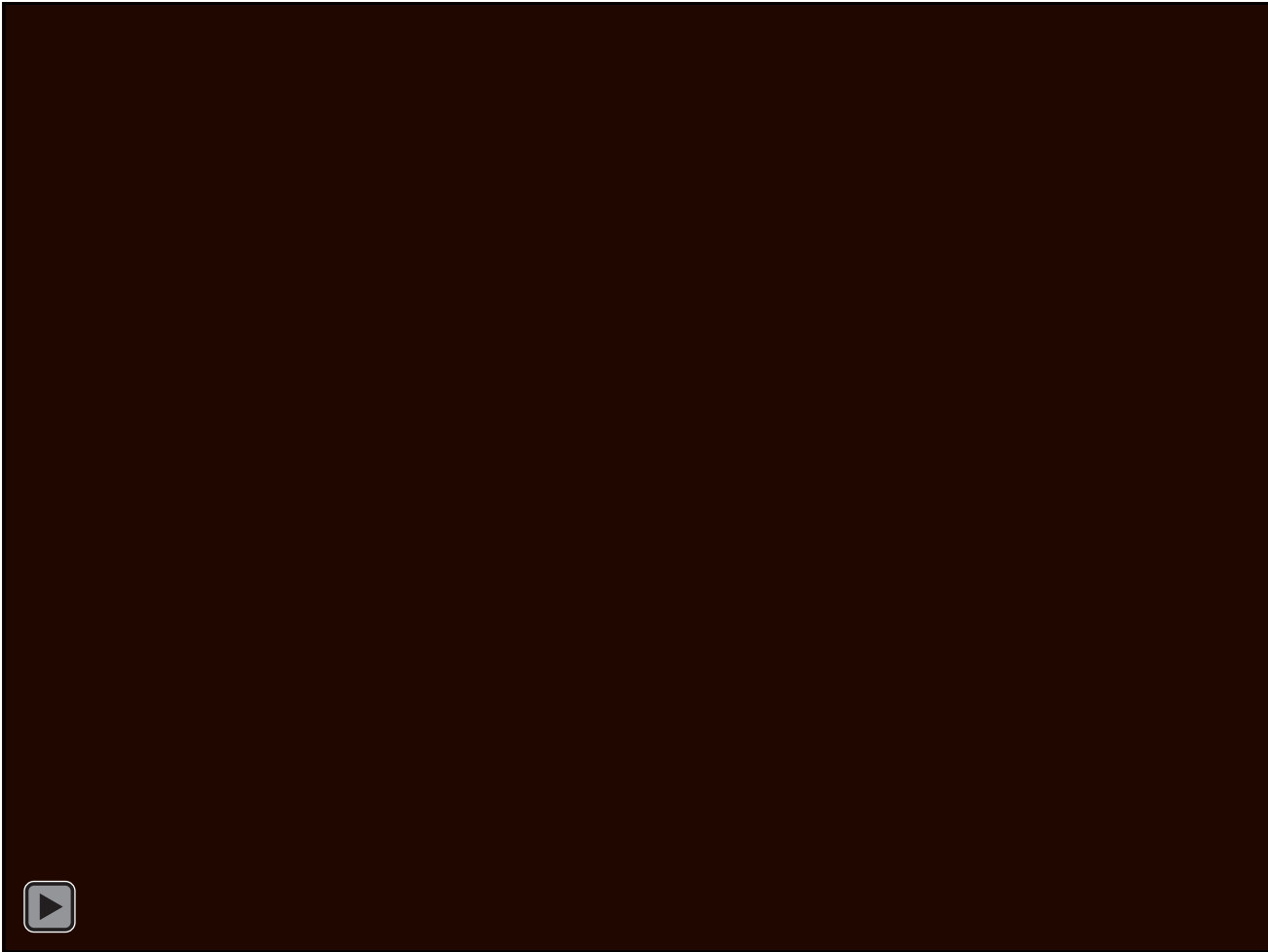




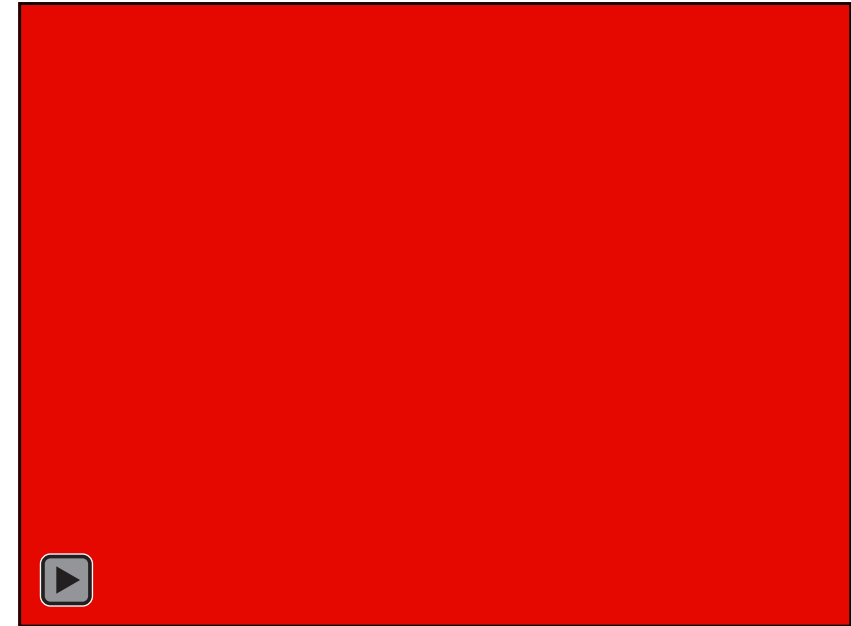
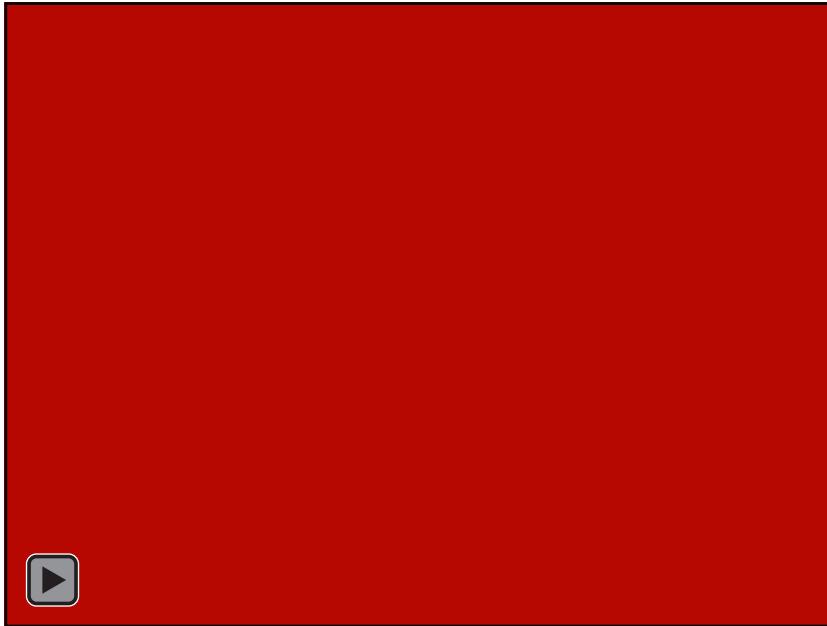
Tratamiento

Otras opciones percutáneas

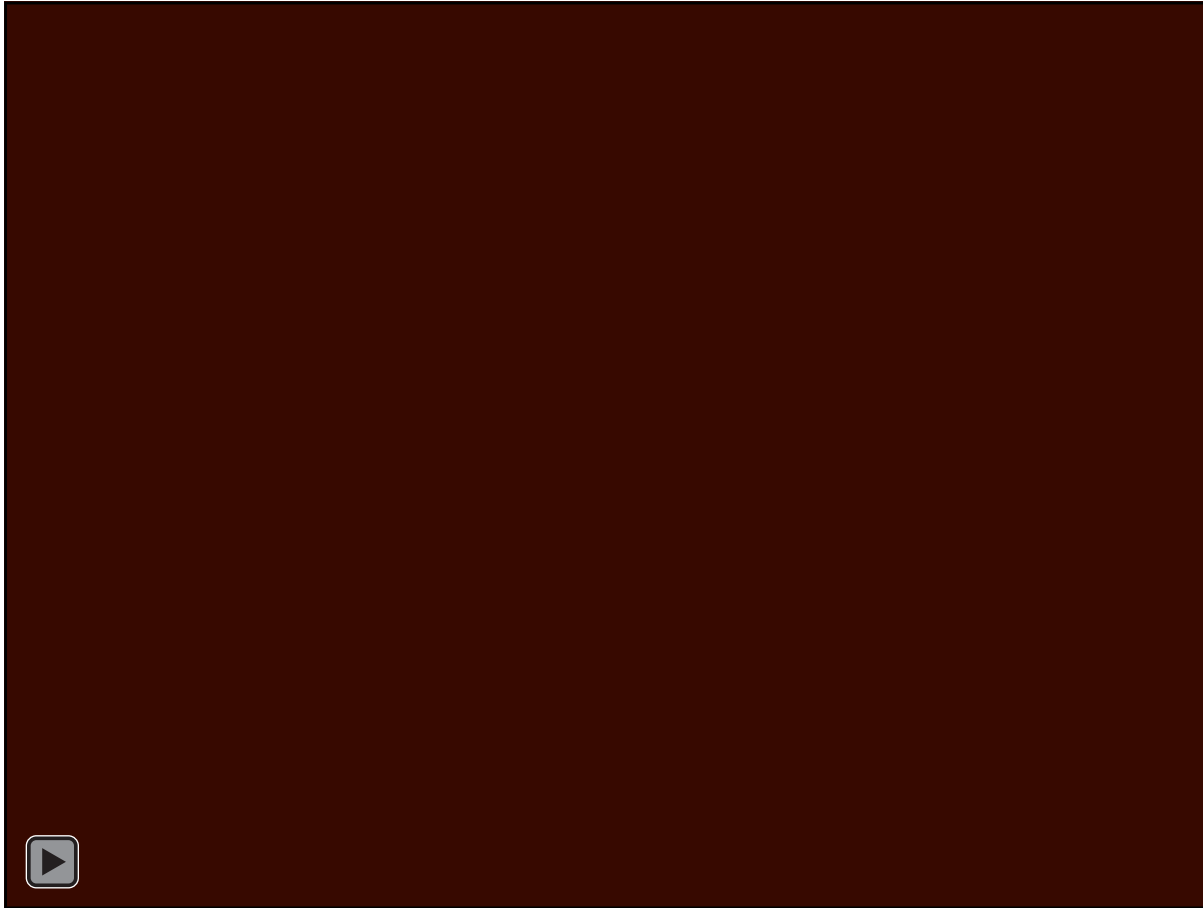




Insuficiencia mitral “atrial”



Insuficiencia mitral persistente o recurrente tras mitraclip



IM primaria

Cirugía (reparación / reemplazo)
Mitraclip (cirugía alto riesgo, sintomático, anatomía factible)

IM secundaria

Optimizar tto médico, revascularización, resincronización, control de arritmias ??
Mitraclip (anatomía factible) / Cirugía
Asistencia, Trasplante cardiaco, DP

Prótesis con insuficiencia periprotésica

Cierre percutáneo de leak

Prótesis biológica con insuficiencia intraprotésica

MAC mitral

Anillo mitral previo

Valve in valve, valve in MAC, valve in ring

En muchos casos - INDIVIDUALIZAR (Heart Valve Clinic)



0.989321

