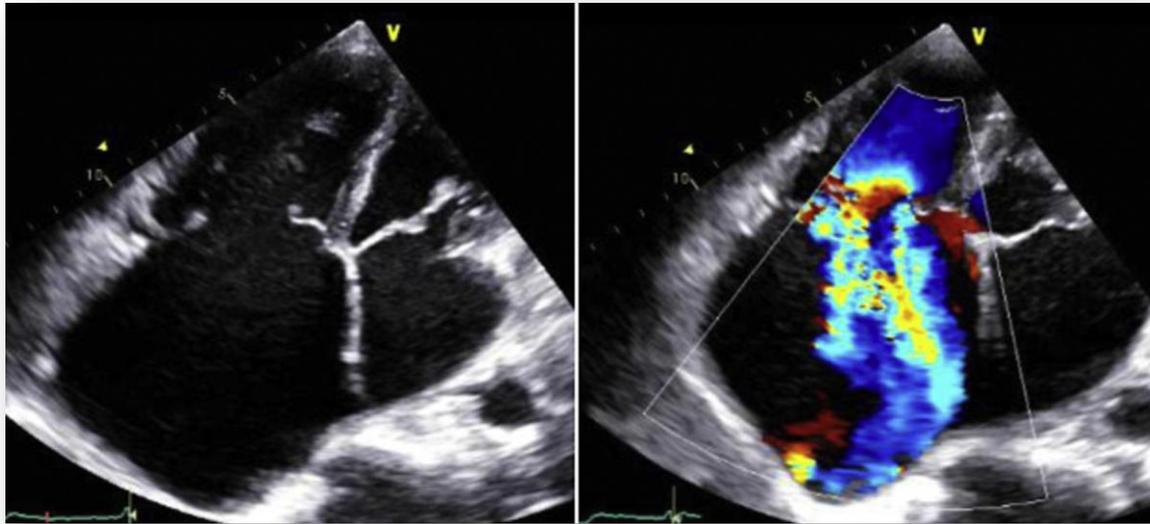


# Chirurgická léčba trikuspidálních vad

Jan Vojáček

Kardiochirurgická klinika LF a FN v Hradci Králové



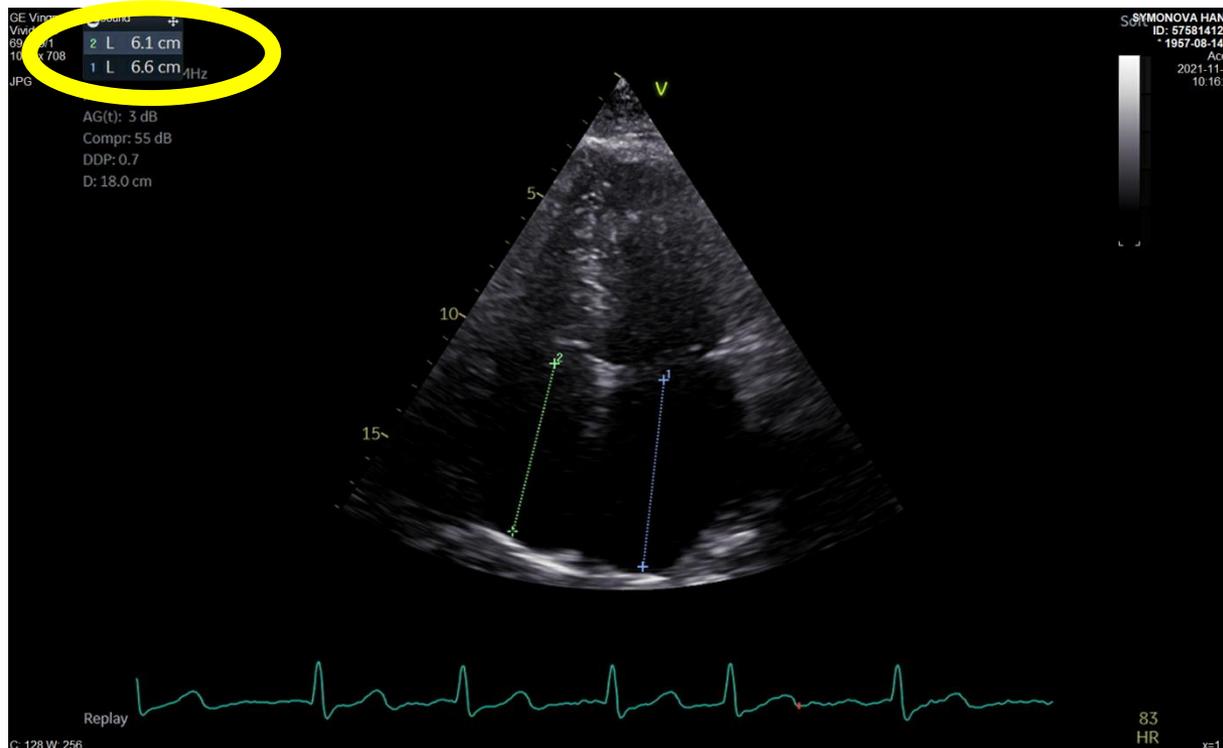
# Operační program - COS:

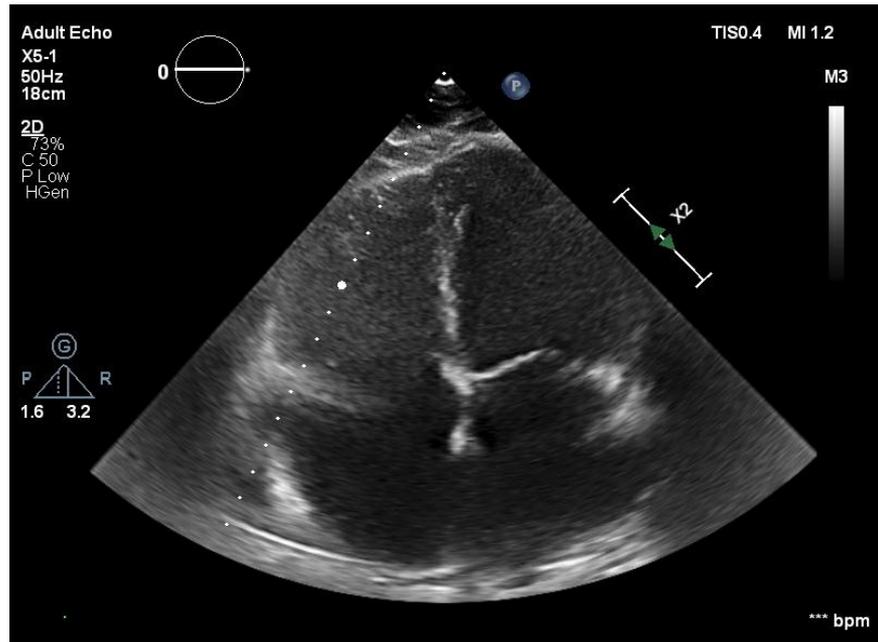
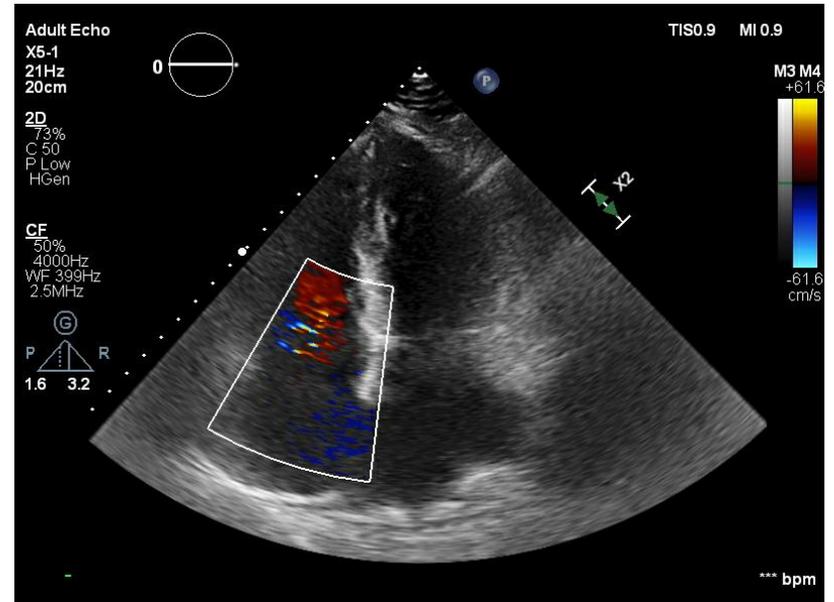
5/8 G	??	1957	CA	S	záda	JIP 3	Tri vada + jiné	TVP, ev. MAZE + uzávěr ouška LS
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Žena, 69 let  
TR 4st, NYHA II.st  
Perzistující FiS (2018)

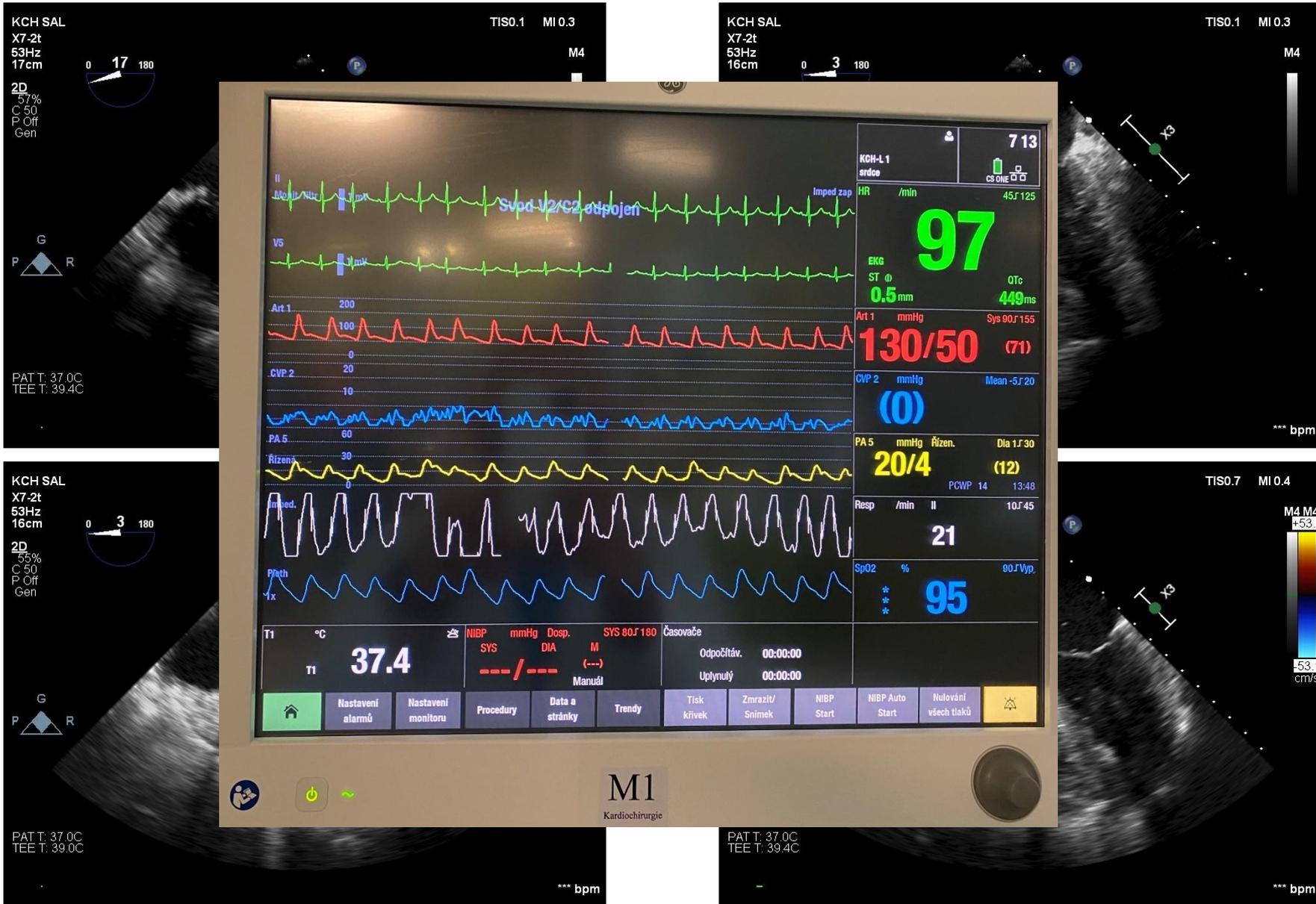
EF LK 60%  
bez ICHS  
Bez postižení chlopní levého srdce

Bez PH  
AH, DM  
Triq.anulus: 46

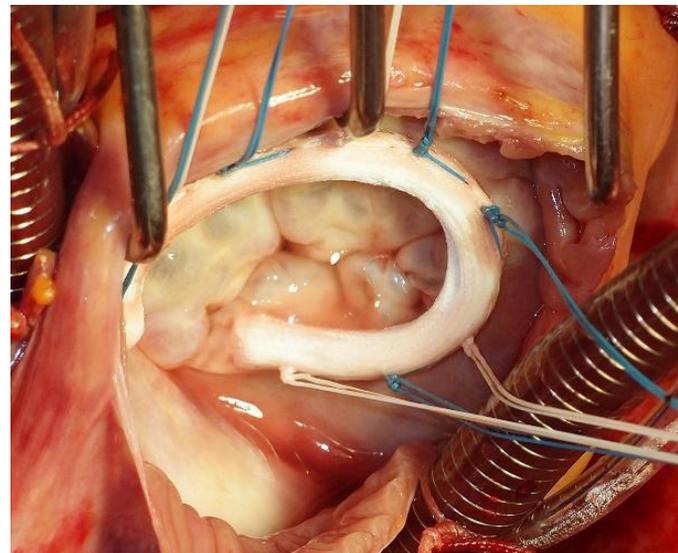
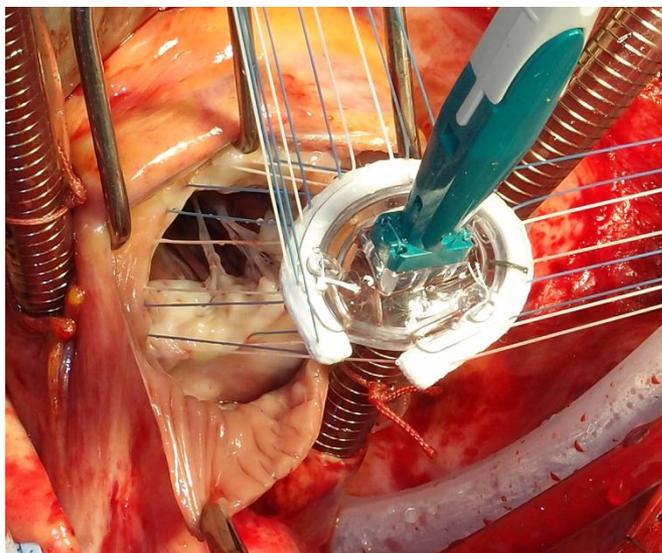
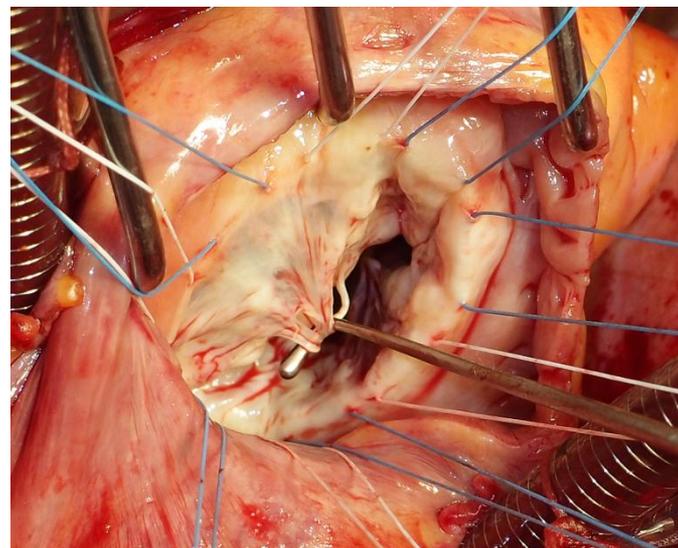
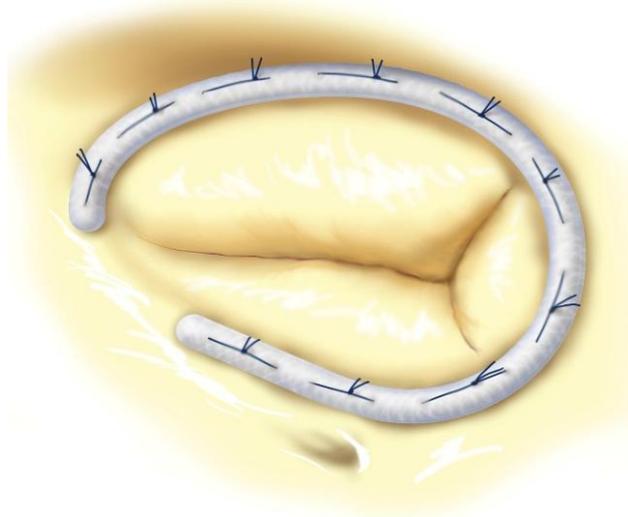




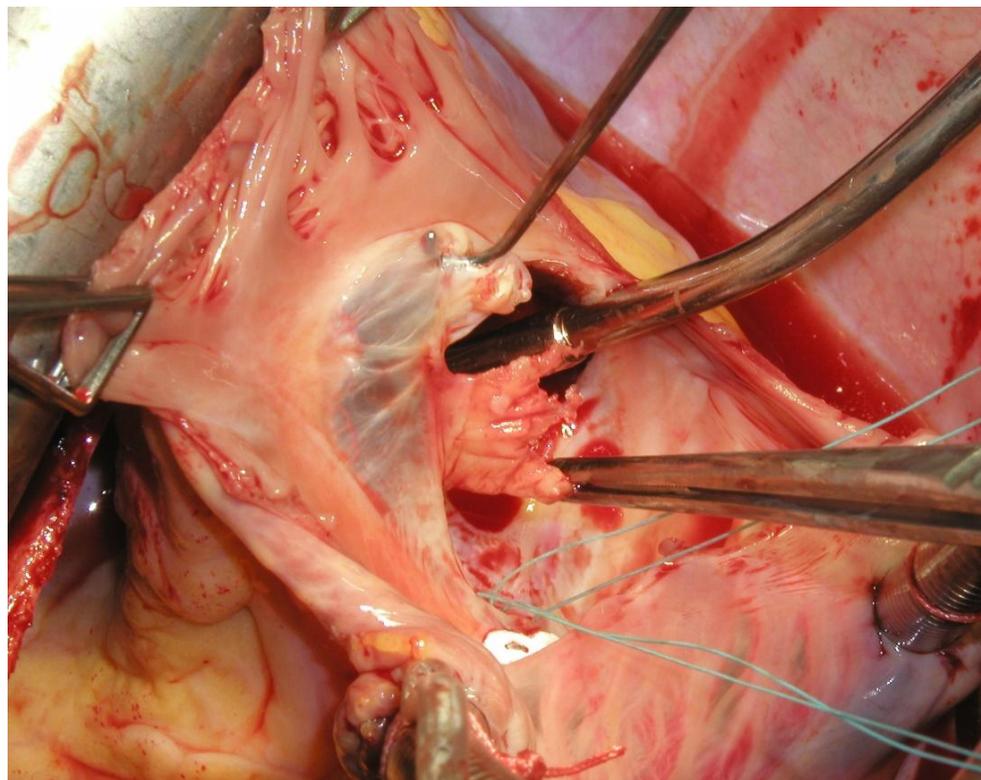
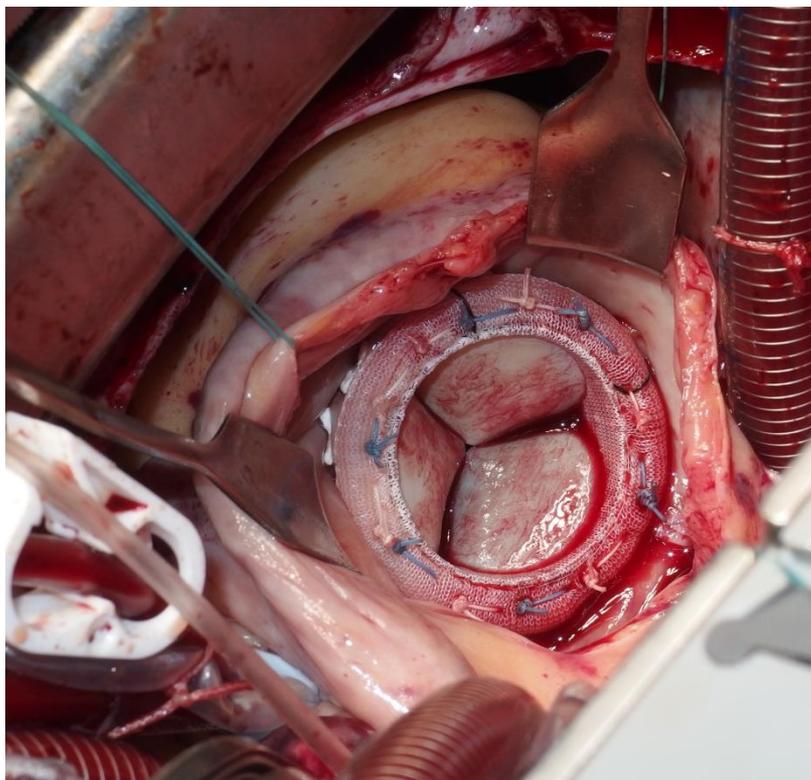
# TVP, cryoMAZE, uzávěr ouška LS

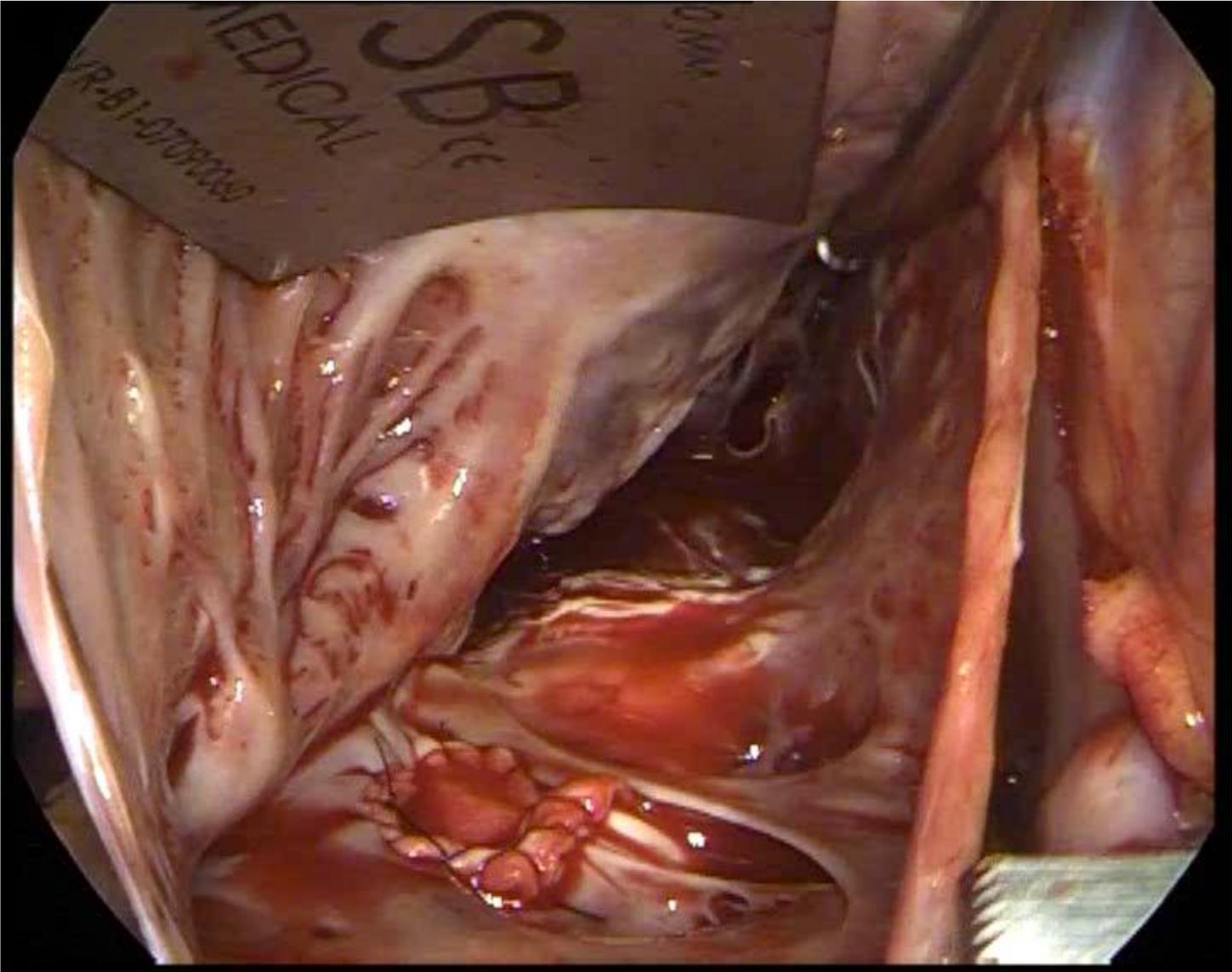


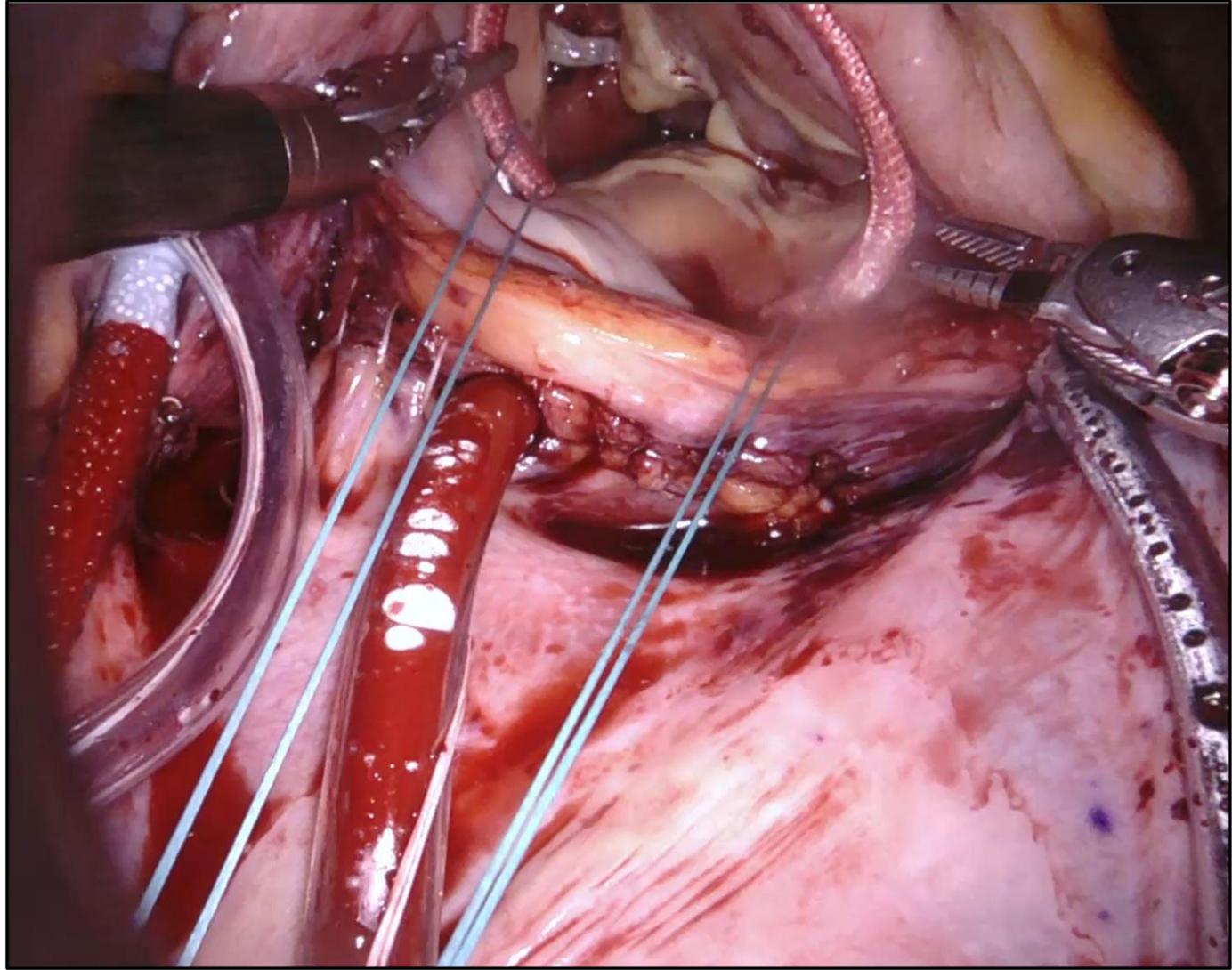
# Typy výkonů na trikuspidální chlopní



# Typy výkonů na trikuspidální chlopní

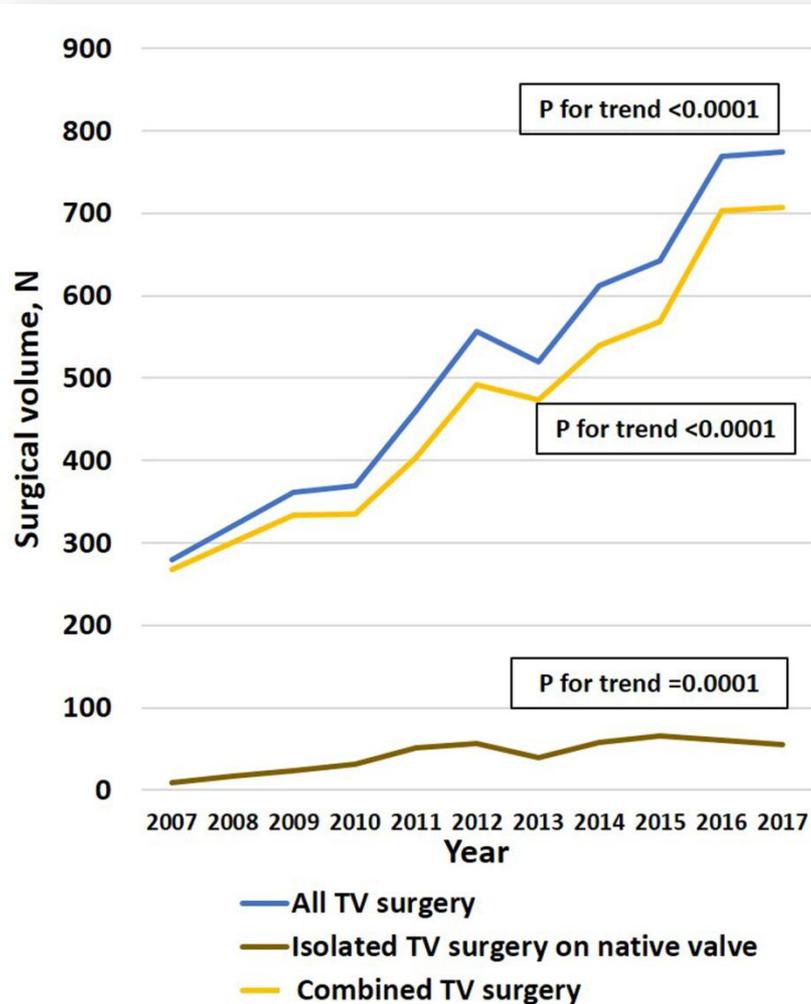






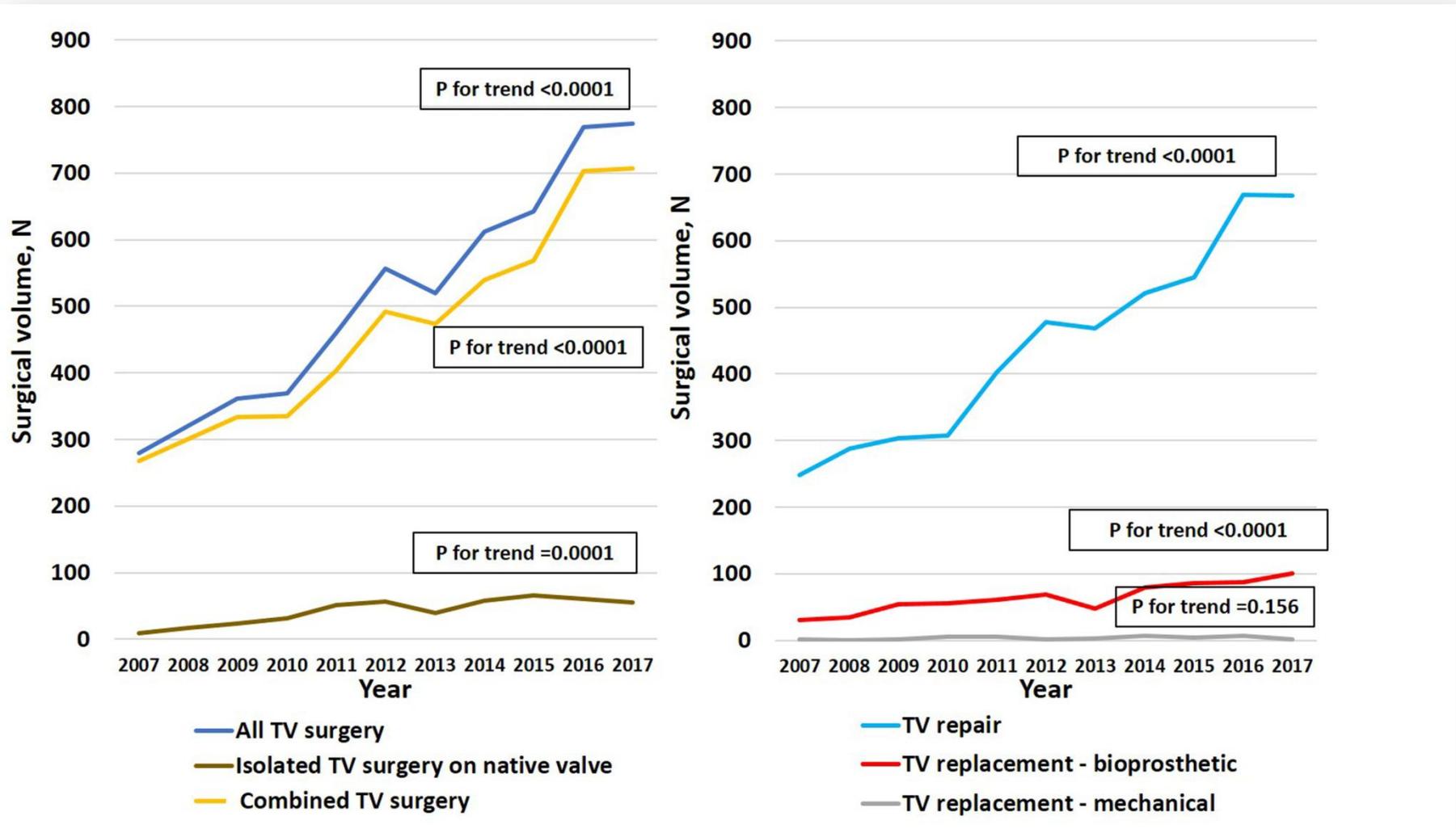
# 5611 pacientů z 12 francouzských center

2007 - 2017

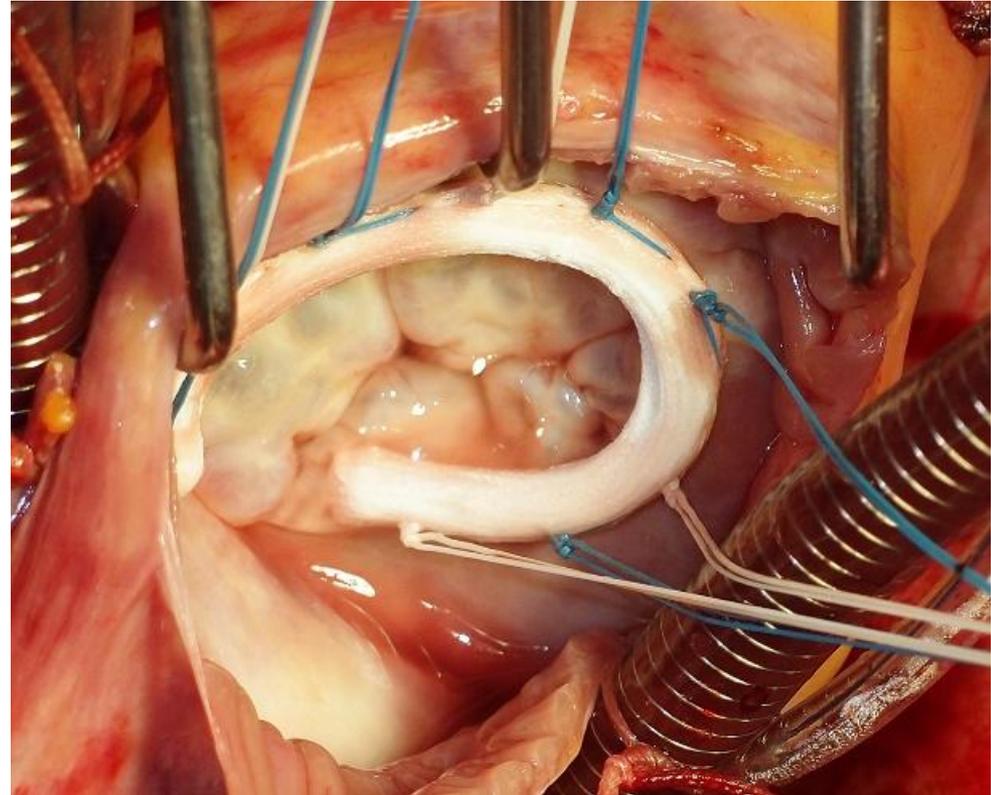
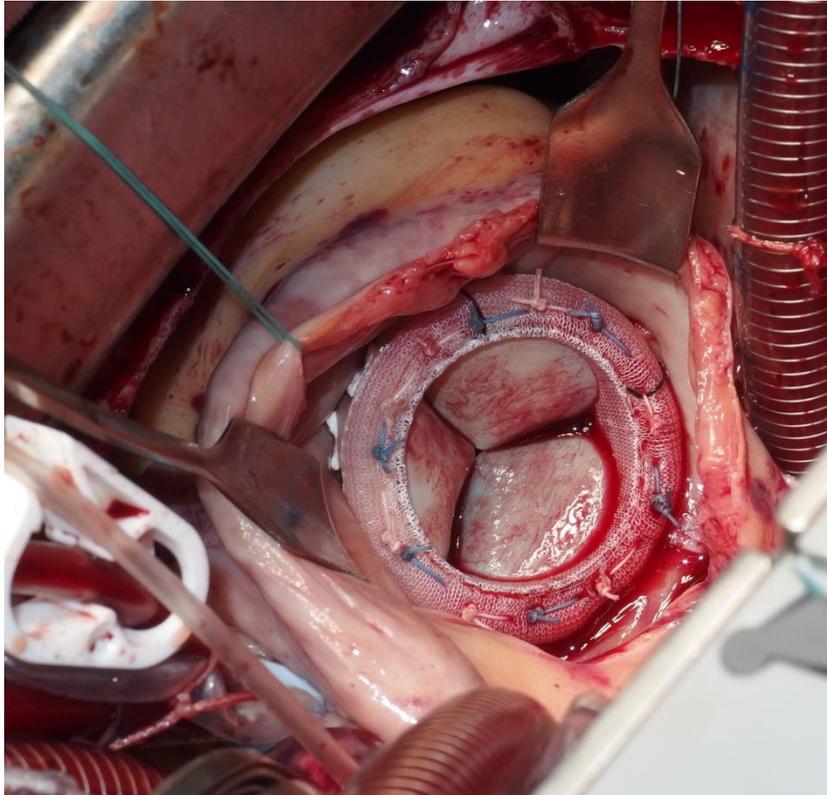


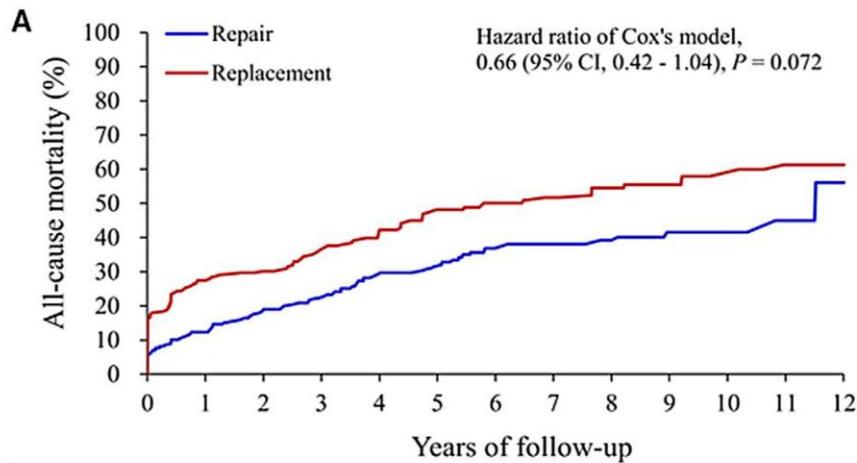
# 5611 pacientů z 12 francouzských center

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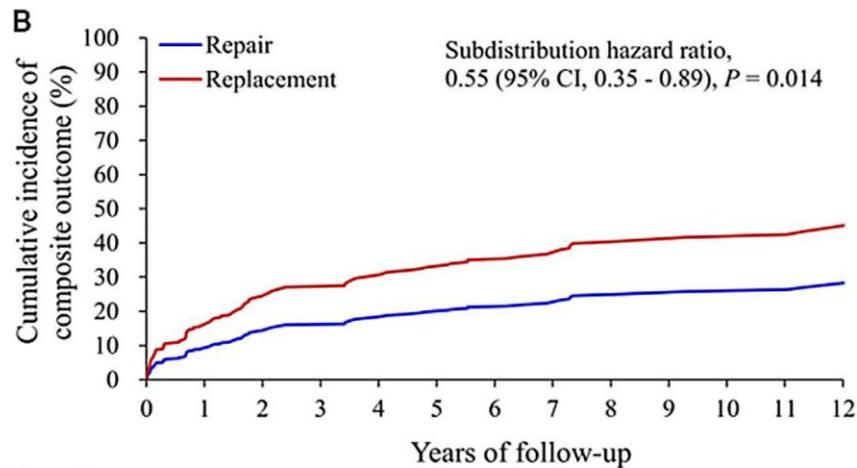
# TVR x TVP??





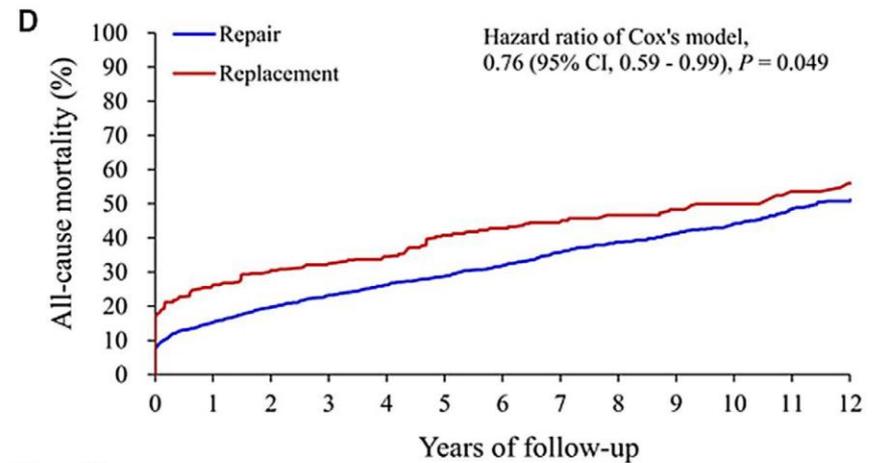
No. at risk:

Repair	330	223	162	107	75	47	22
Replacement	340	194	148	103	73	49	31



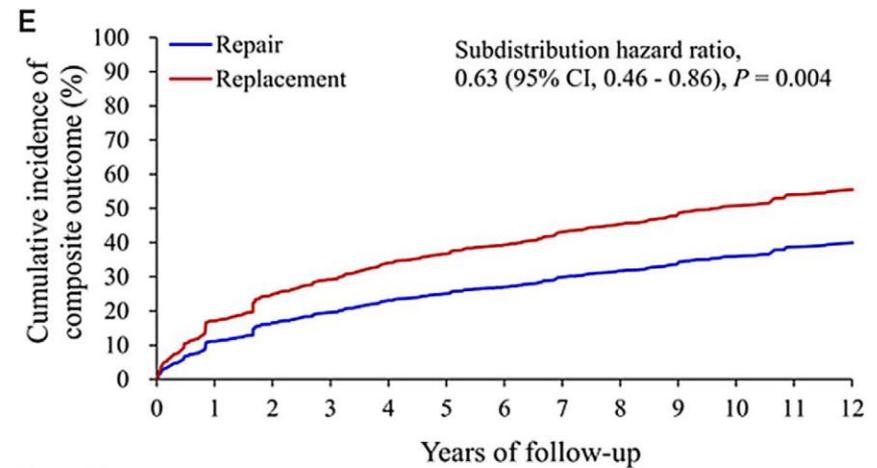
No. at risk:

Repair	311	200	147	94	65	36	13
Replacement	293	151	87	73	55	37	29



No. at risk:

Repair	2312	1586	1186	888	602	380	161
Replacement	2281	1348	1038	643	420	255	118



No. at risk:

Repair	2144	1412	988	705	460	275	109
Replacement	1910	991	723	455	274	129	65

Wong WK at all: Late Outcomes of Valve Repair Versus Replacement in Isolated and Concomitant Tricuspid Valve Surgery: A Nationwide Cohort Study. J Am Heart Assoc. 2020 Apr 21;9(8):e015637.

Patient with tricuspid regurgitation

Need for left-sided valve surgery

N

Y

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

# Concomitant Tricuspid Repair in Patients with Degenerative Mitral Regurgitation

J.S. Gammie, M.W.A. Chu, V. Falk, J.R. Overbey, A.J. Moskowitz, M. Gillinov, M.J. Mack, P. Voisine, M. Krane, B. Yerokun, M.E. Bowdish, L. Conradi, S.F. Bolling, M.A. Miller, W.C. Taddei-Peters, N.O. Jeffries, M.K. Parides, R. Weisel, M. Jessup, E.A. Rose, J.C. Mullen, S. Raymond, E.G. Moquete, K. O'Sullivan, M.E. Marks, A. Iribarne, F. Beyersdorf, M.A. Borger, A. Geirsson, E. Bagiella, J. Hung, A.C. Gelijns, P.T. O'Gara, and G. Ailawadi, for the CTSN Investigators\*

Medical therapy

Transcatheter therapy<sup>a</sup>

TV surgery<sup>b</sup>

## Patients with severe tricuspid regurgitation without left-sided valvular heart disease requiring surgery

TV surgery<sup>c</sup> is recommended in symptomatic patients with severe primary TR without severe RV dysfunction or severe PH.

**I**

**C**

TV surgery<sup>c</sup> should be considered in asymptomatic patients with severe primary TR who have RV dilatation/RV function deterioration, but without severe LV/RV dysfunction or severe PH.

**IIa**

**C**

TV surgery<sup>c</sup> should be considered in patients with severe secondary TR who are symptomatic or have RV dilatation/RV function deterioration, but without severe LV/RV dysfunction or PH.<sup>685,720,745–747</sup>

**IIa**

**B**

Transcatheter TV treatment should be considered to improve quality of life and RV remodelling in high-risk patients with symptomatic severe TR despite optimal medical therapy in the absence of severe RV dysfunction or pre-capillary PH.<sup>713,733,735,738,748–751</sup>

**IIa**

**A**

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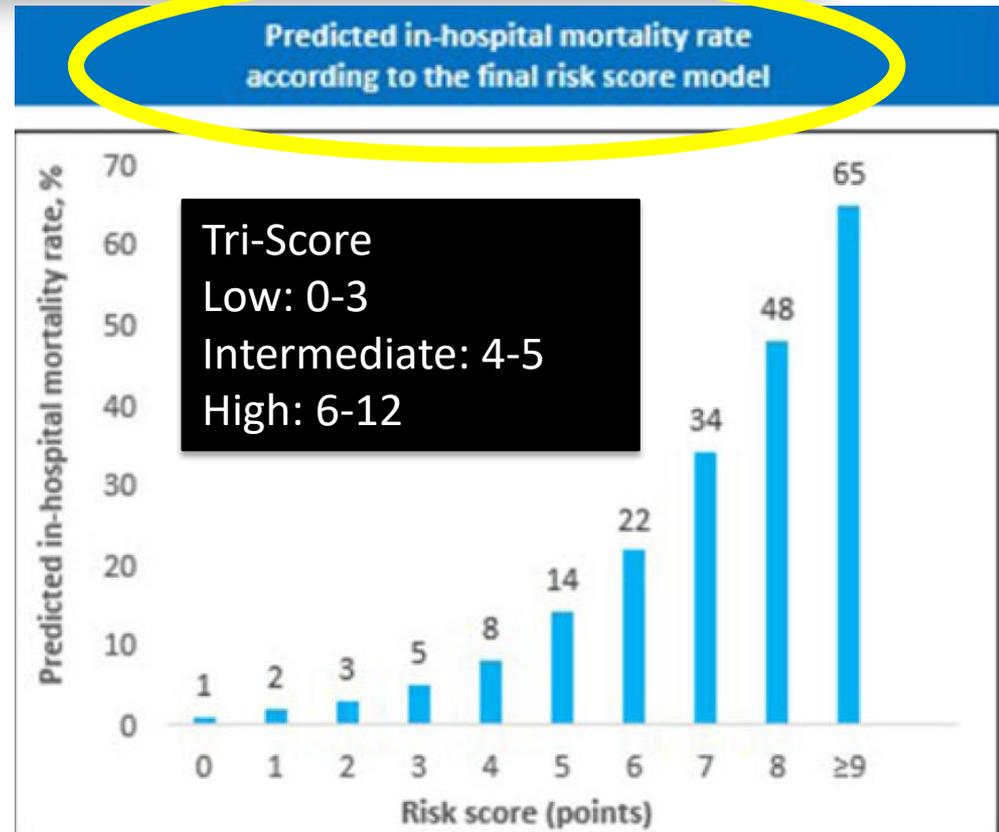
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**IIa**

**A**

# TRI-SCORE: a new risk score for in-hospital mortality prediction after isolated tricuspid valve surgery

Risk factors and scoring system for in-hospital mortality after isolated tricuspid valve surgery	
Risk factors (final model from multivariate analysis)	Scoring
Age ≥ 70 years	1
NYHA functional class III-IV	1
Right-sided heart failure signs	2
Daily dose of furosemide ≥ 125mg	2
Glomerular filtration rate < 30 ml/min	2
Elevated total bilirubin	2
Left ventricular ejection fraction < 60%	1
Moderate/severe right ventricular dysfunction	1
<b>Total</b>	<b>12</b>



# TRI-SCORE and benefit of intervention in patients with severe tricuspid regurgitation <sup>FREE</sup>

Julien Dreyfus, MD, PhD ✉, Xavier Galloo, MD, Maurizio Taramasso, MD, PhD, Gregor Heitzinger, MD, Giovanni Benfari, MD, PhD, Karl-Patrick Kresoja, MD,

EHI 2023

TRIGISTRY: multicenter registry (33 centers - 10 countries)  
2,413 patients with severe isolated functional tricuspid regurgitation

Comparison of the survival rates at 2 years between the different treatment modalities according to the TRI-SCORE category (low, intermediate and high).

1217 patients conservatively managed

551 underwent an isolated tricuspid valve surgery

645 underwent a transcatheter valve repair

LOW TRI-SCORE (<3)

INTERMEDIATE TRI-SCORE (4-5)

HIGH TRI-SCORE (≥6)

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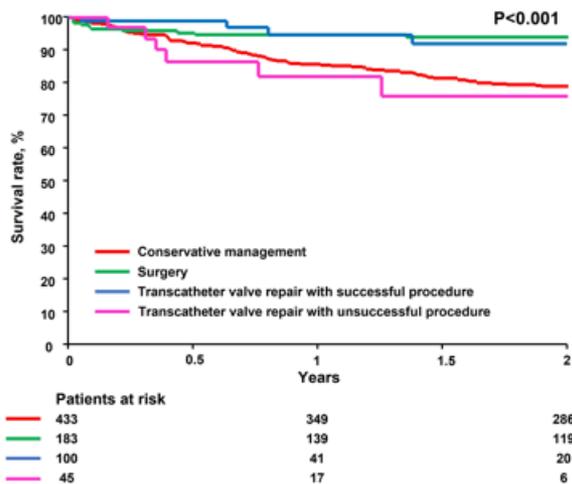
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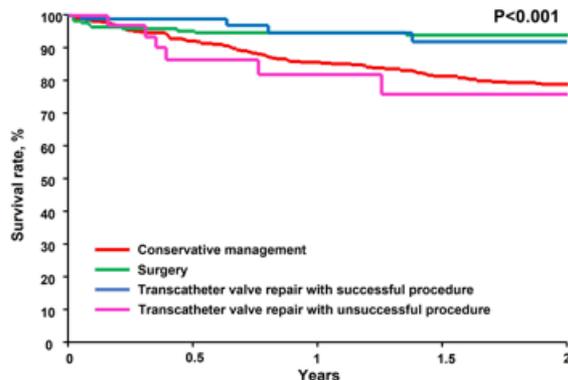
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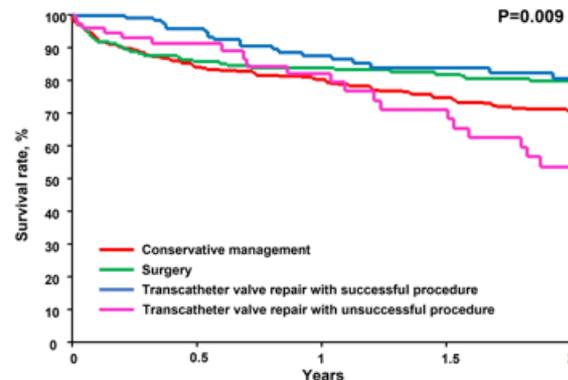
645 underwent a transcatheter valve repair

## LOW TRI-SCORE (<3)



Patients at risk			
	0	1	2
Conservative management	433	349	286
Surgery	183	139	119
Transcatheter valve repair with successful procedure	100	41	20
Transcatheter valve repair with unsuccessful procedure	45	17	6

## INTERMEDIATE TRI-SCORE (4-5)



Patients at risk			
	0	1	2
Conservative management	359	256	194
Surgery	185	130	109
Transcatheter valve repair with successful procedure	172	79	36
Transcatheter valve repair with unsuccessful procedure	83	36	14

## HIGH TRI-SCORE ( $\geq 6$ )

# TRI-SCORE and benefit of intervention in patients with severe tricuspid regurgitation <sup>FREE</sup>

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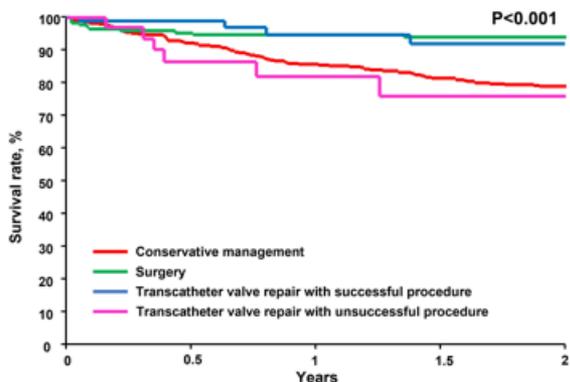
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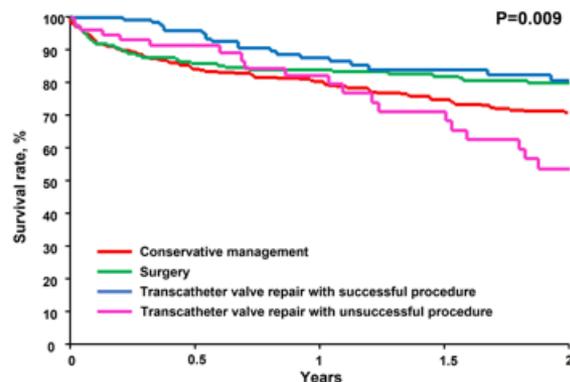
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## LOW TRI-SCORE (<3)



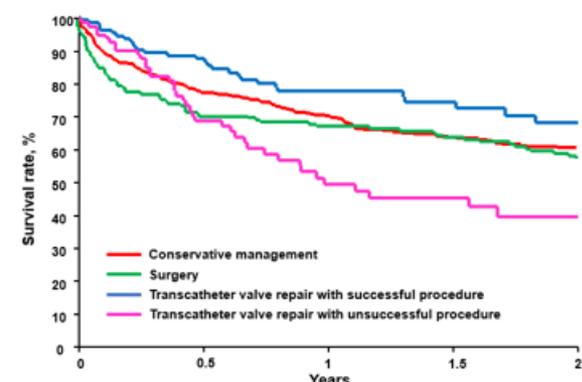
Patients at risk			
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Surgery	183	139	119
Transcatheter valve repair with successful procedure	100	41	20
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## INTERMEDIATE TRI-SCORE (4-5)

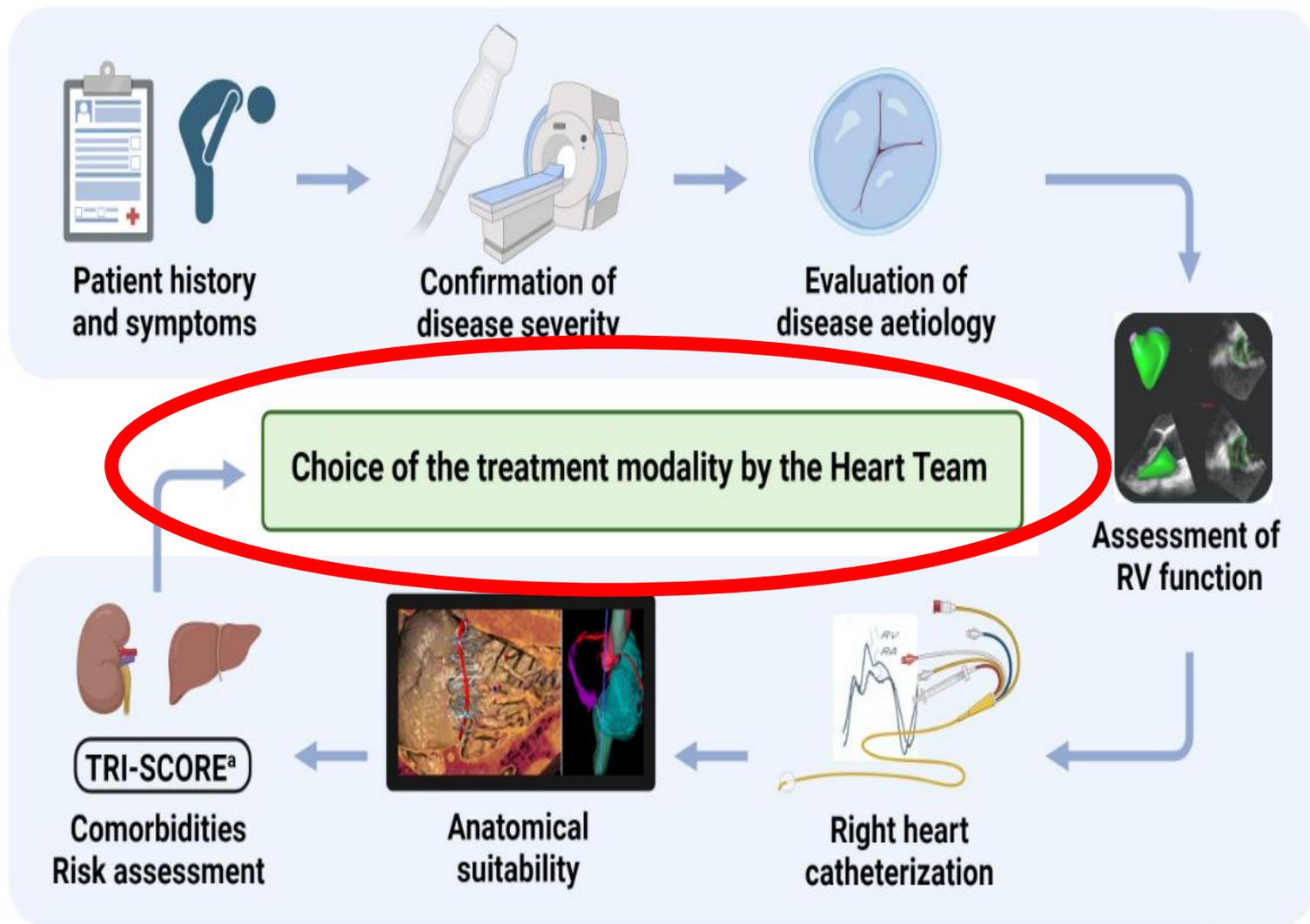


Patients at risk			
Conservative management	359	256	194
Surgery	185	130	109
Transcatheter valve repair with successful procedure	172	79	36
Transcatheter valve repair with unsuccessful procedure	83	36	14

## HIGH TRI-SCORE (≥6)

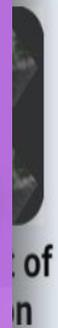
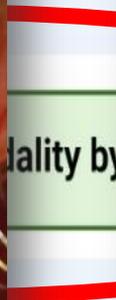
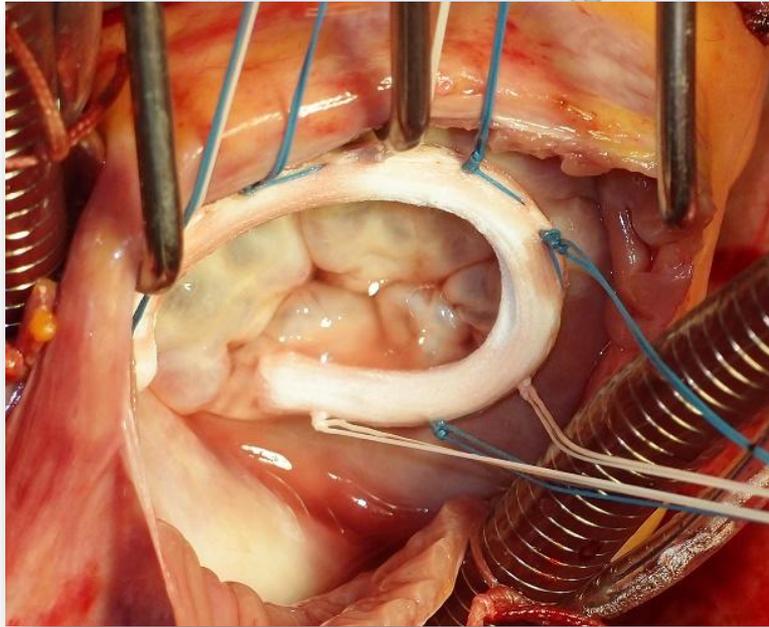
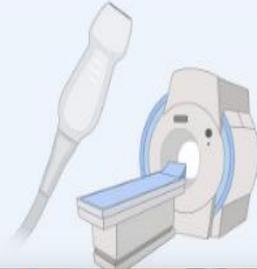


Patients at risk			
Conservative management	425	241	168
Surgery	183	106	80
Transcatheter valve repair with successful procedure	141	59	24
Transcatheter valve repair with unsuccessful procedure	94	27	11



RV, right ventricular.

<sup>a</sup> See Supplementary data online *Table S7*.



**Comorbidities  
Risk assessment**

**Anatomical  
suitability**

**Right heart  
catheterization**

RV, right ventricular.

<sup>a</sup> See Supplementary data online *Table S7*.

