



# Clinical Case Debate

TAVI or not TAVI ?

# Case 1

2<sup>nd</sup> International Meeting  
on Aortic Diseases  
New insights into an old problem  
September 30 & October 1-2 2010  
Liège, Belgium

- 87yrs, male
- Type 2 diabetes, HTN, hypercholesterolemia
- Inferior MI (1973)
- CABGx4 (3 SVG's) (1983)
- PCI SVG LAD (1997)
- PCMK (SSS) (03/2010)
- TEA left femoral, left iliac stent and cross-over  
left>right (2010)



- Med's:

Bisoprolol, amlodipine, candesartan, ASA,  
ticlopidine, omeprazole, furosemide,  
repaglinide

- Clinical exam.:

Admitted on 09/29 because of dyspnea.  
bronchopneumonia of left lower lobe

64kg, 165cm. O<sup>2</sup>sat: 96%

HR:88/min; BP: 110/60mmHg

SEGA score: 15/26



- Lab tests (03/10):

Hb: 9.8g/dl

Creat: 18.6mg/L, GFR: 35ml/min

Glycemia: ~2.0g/L

CRP: 76.9mg/L

Comments: GFR 54ml/min on 06/09

2<sup>nd</sup> International Meeting  
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Liège, Belgium

GÉRARDY, LOUIS  
0317256T  
M 11/22/1925  
Run 2 - Frame 1 / 73



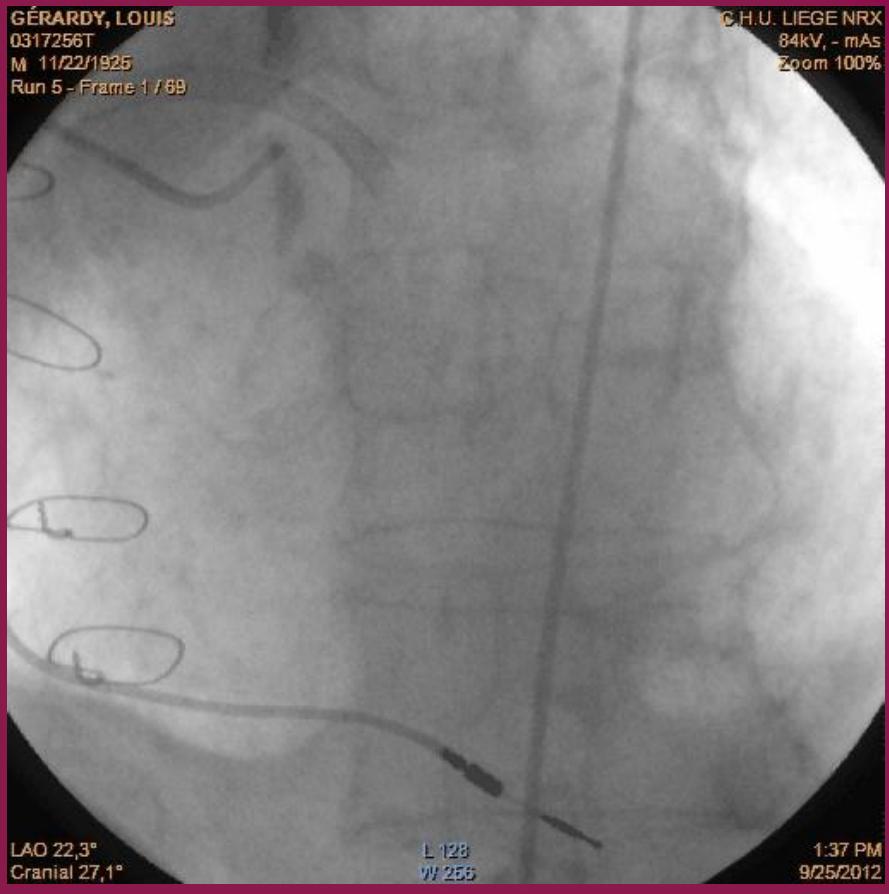
C.H.U. LIEGE NRX  
75kV, - mAs  
Zoom 100%

1:36 PM  
9/25/2012

RAO -1,5°  
Caudal -17,9°

L 128  
W 256

GÉRARDY, LOUIS  
0317256T  
M 11/22/1925  
Run 5 - Frame 1 / 69



LAO 22,3°  
Cranial 27,1°

L 128  
W 256

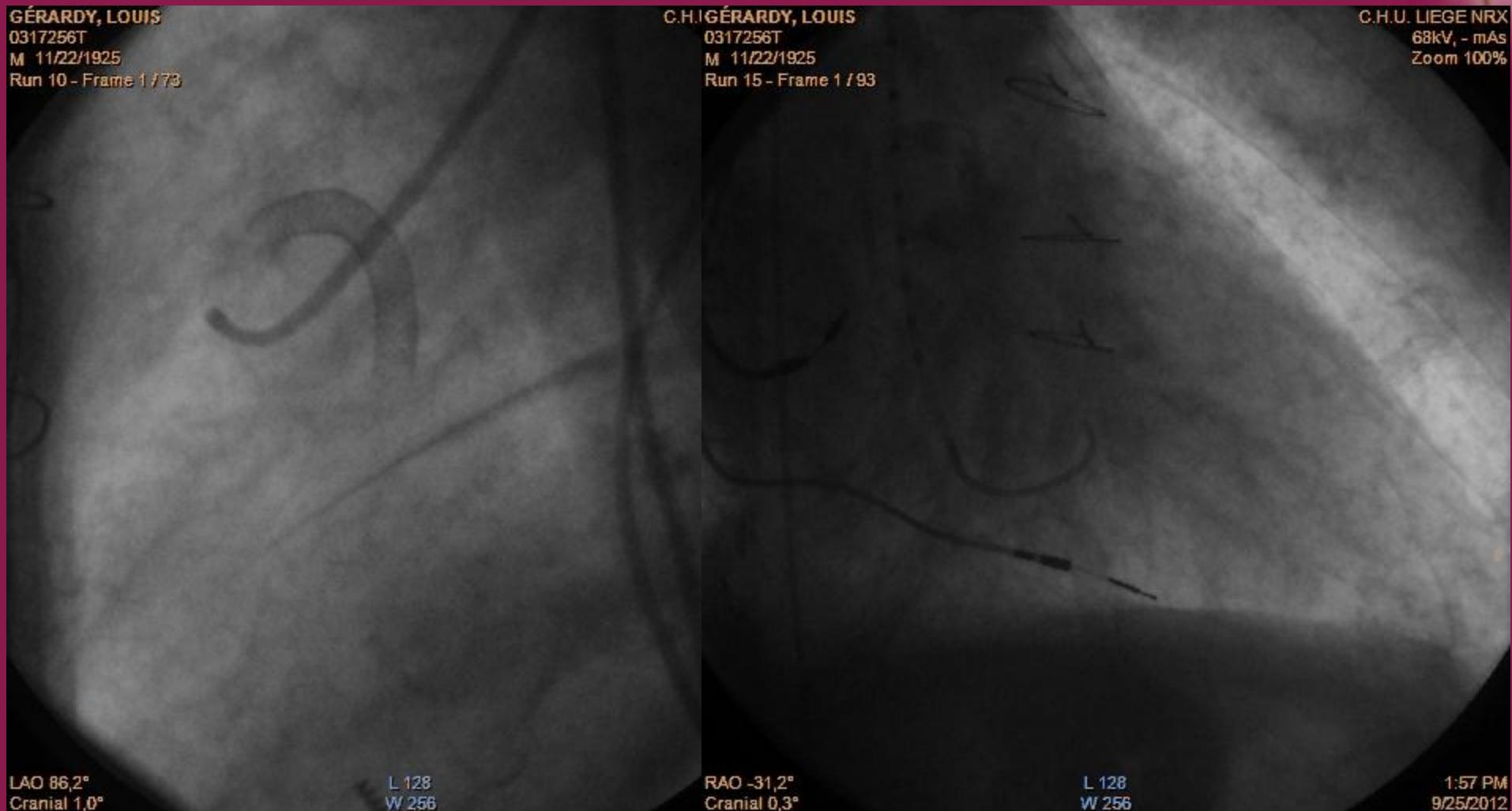
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9/25/2012



GÉRARDY, LOUIS  
0317256T  
M 11/22/1925  
Run 10 - Frame 1 / 73

C.H.U.GÉRARDY, LOUIS  
0317256T  
M 11/22/1925  
Run 15 - Frame 1 / 93

C.H.U. LIEGE NRX  
68kV, - mAs  
Zoom 100%



LAO 86,2°  
Cranial 1,0°

L 128  
W 256

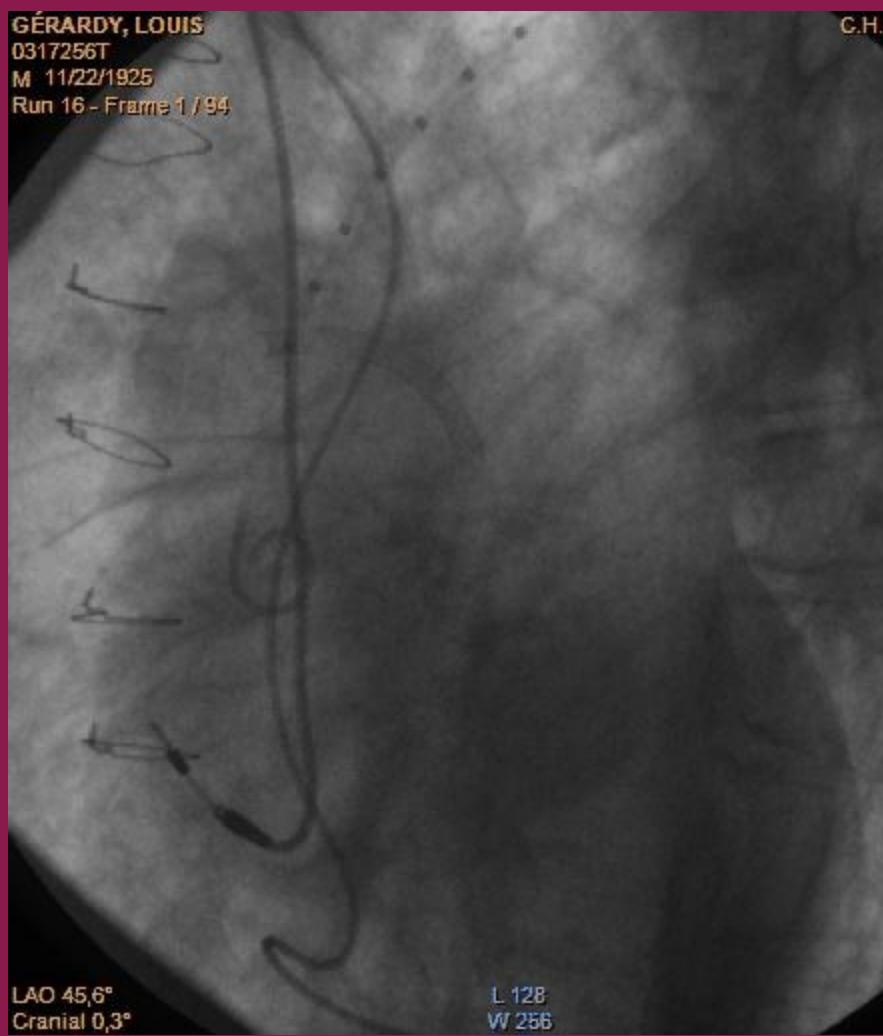
RAO -31,2°  
Cranial 0,3°

L 128  
W 256

1:57 PM  
9/25/2012



GÉRARDY, LOUIS  
0317256T  
M 11/22/1925  
Run 16 - Frame 1 / 94



C.H.I

22/11/1925

30

Volume Rendering No cut  
Image size 512  
DFOV 74.0 x 66.0 cv  
B25P No Image Filter

R  
L  
A  
P

No 502  
KV 120  
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H = 700 L = 200  
1mm



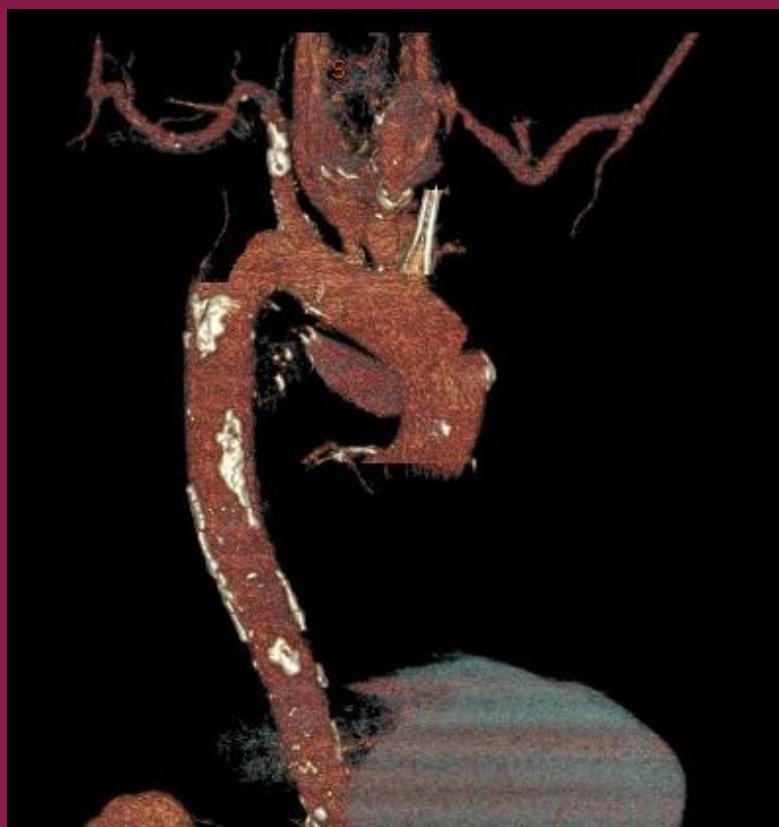
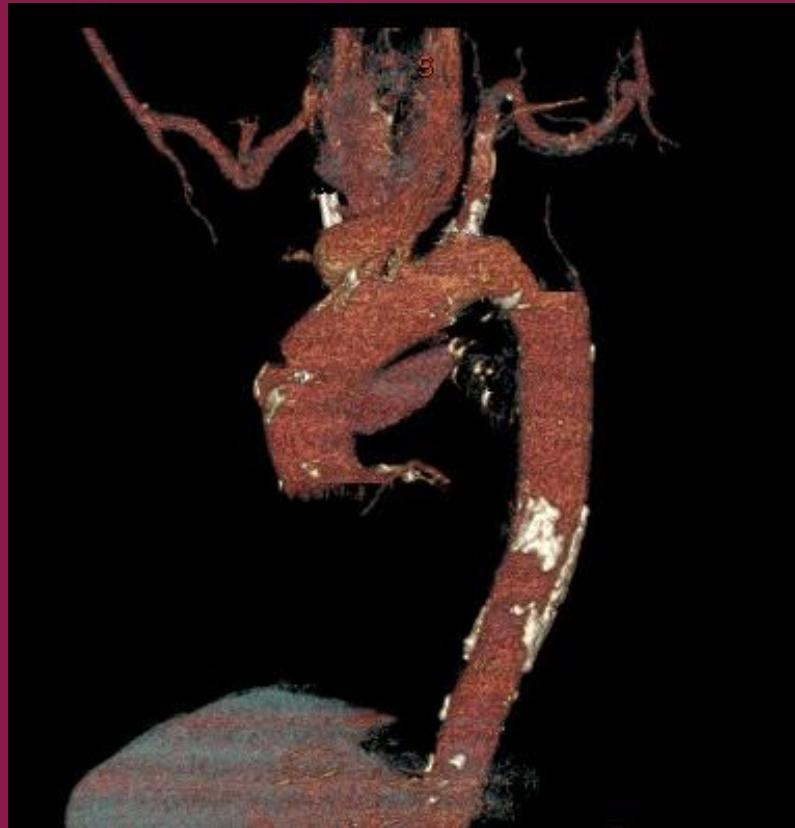
msec  
mA  
kV:

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Liège, Belgium

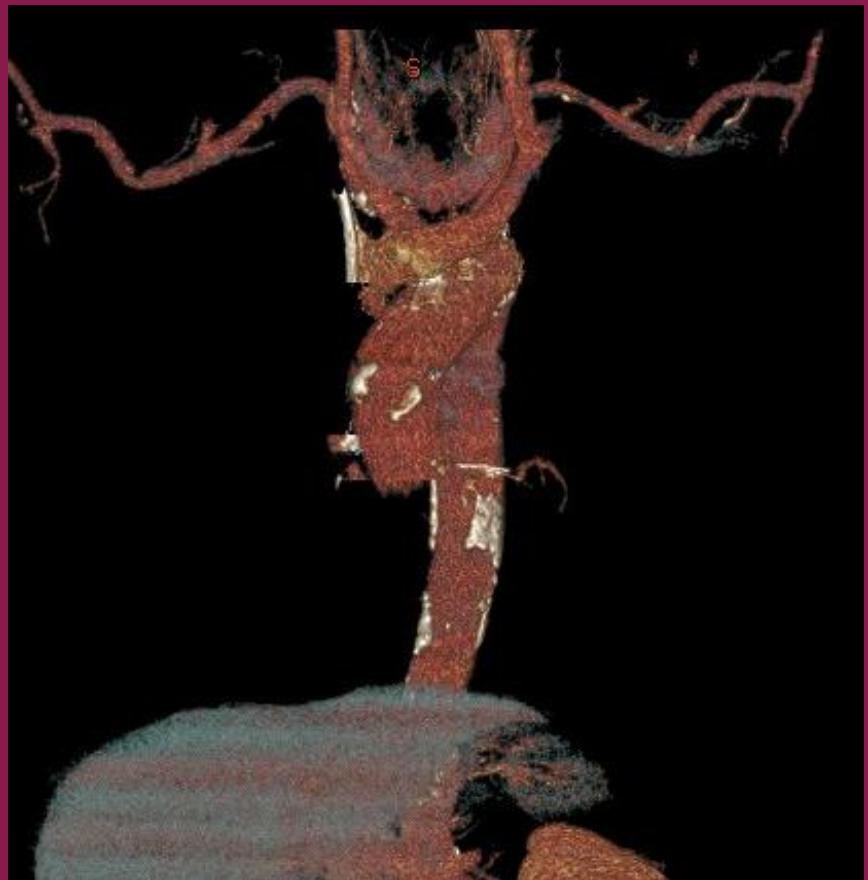


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on Aortic Diseases

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September 30 & October 1-2 2010

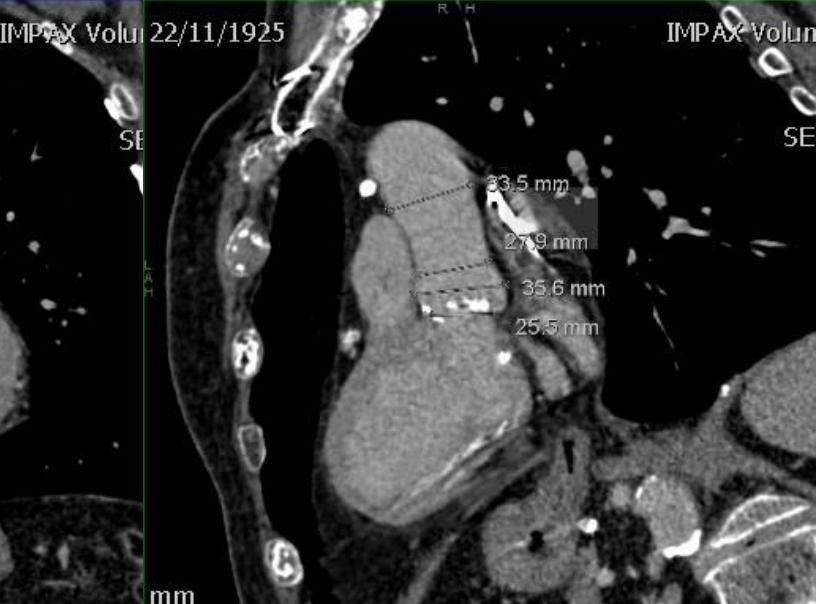
Liège, Belgium



22/11/1925



IMPAX Volu 22/11/1925



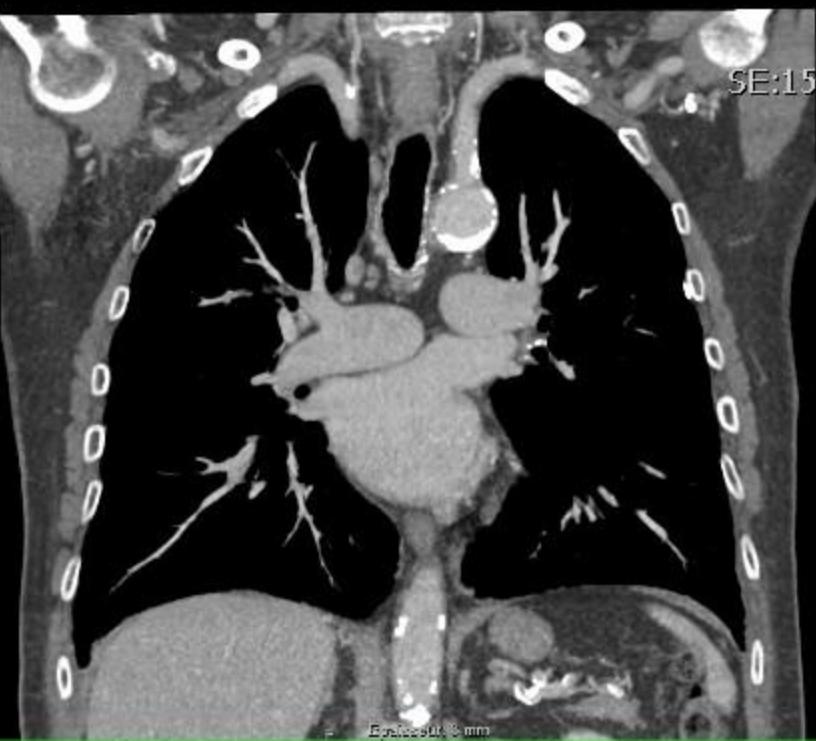
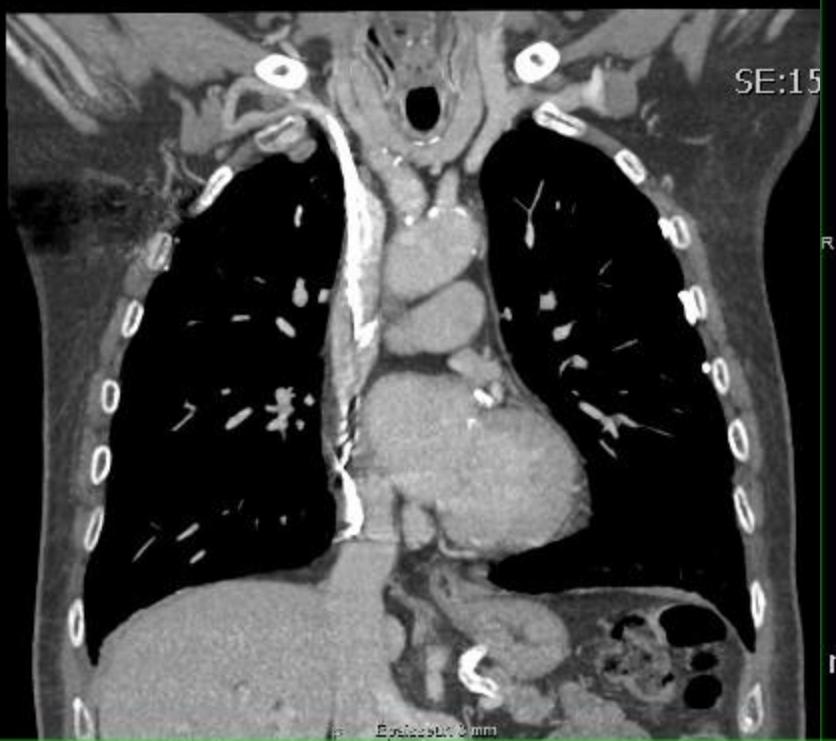
22/11/1925

IMPAX Volume 22/11/1925

SE:1500 IM:6

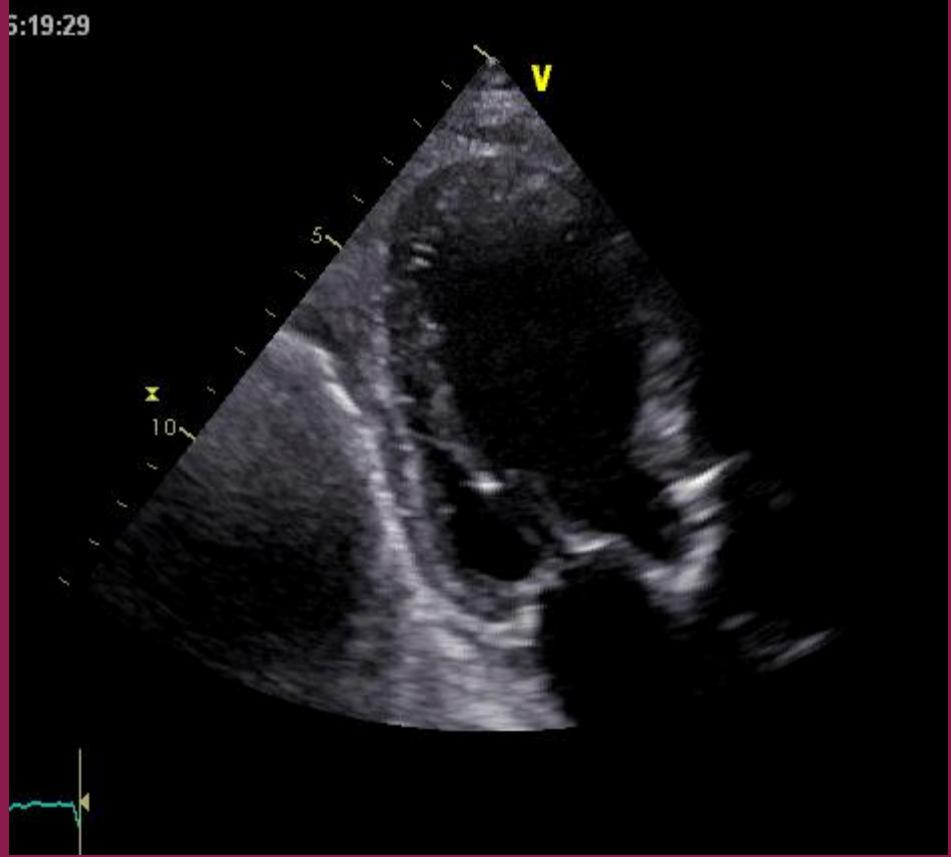
22/11/1925

IMPAX Volume Viewing



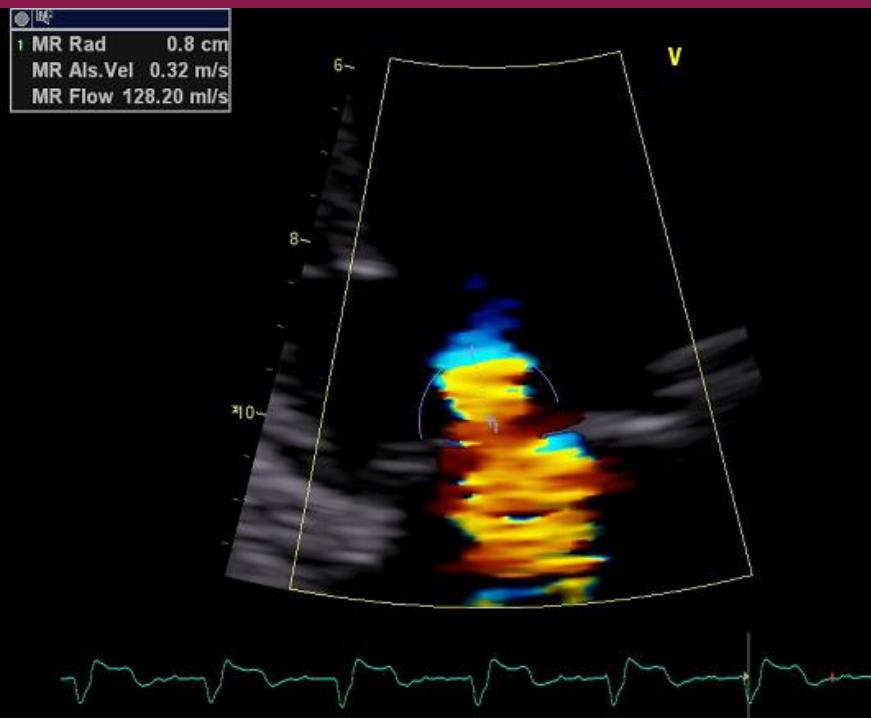
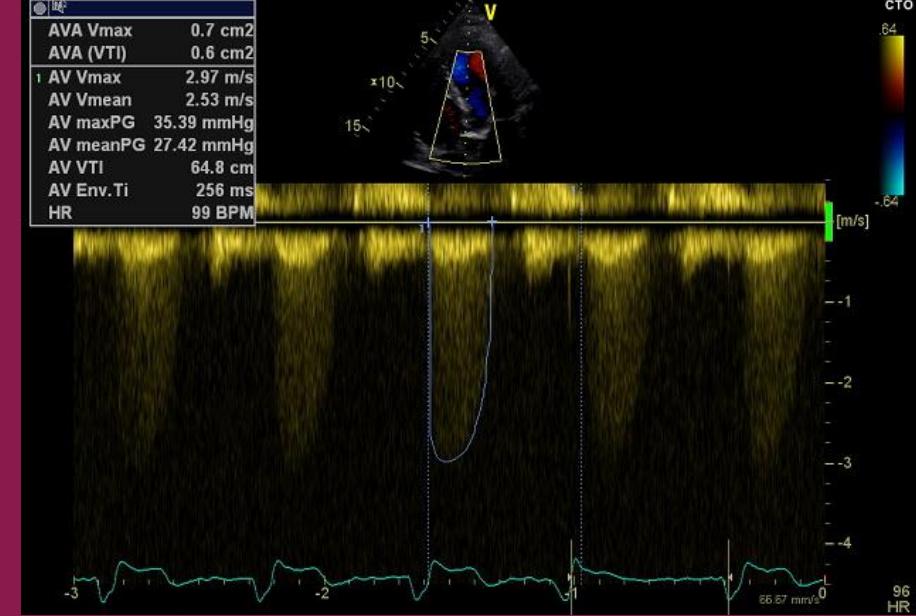
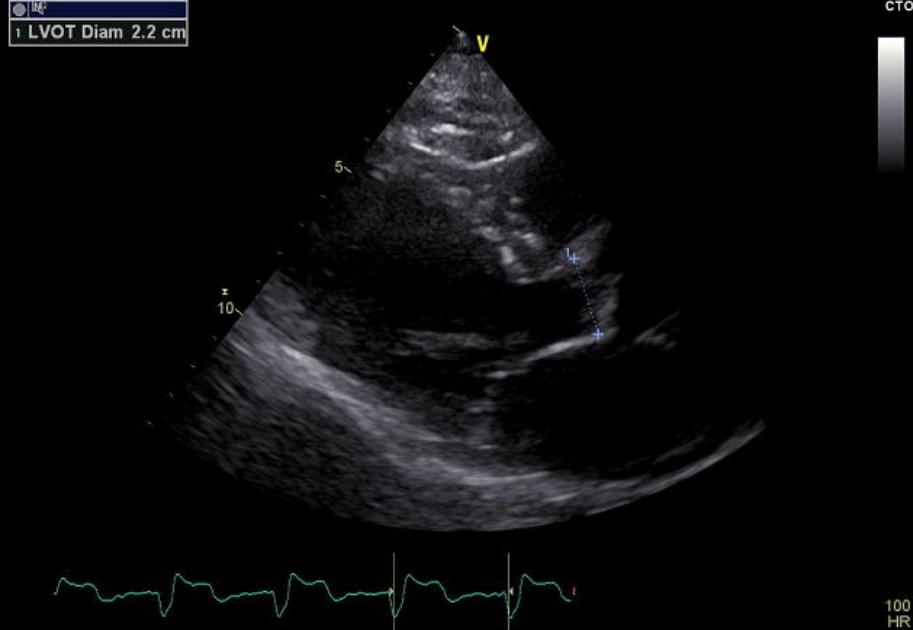


6:19:29



6:19:15





## Conclusions:

Mean grad: 27mmHg; Area: 0.6cm<sup>2</sup>  
AoS “low” flow, “low gradient”

Pulmonary HTN: PSAP: 60mmHg

Severe functional MR: ERO: 23mm<sup>2</sup>



1. Surgery
2. TAVI
3. Conservative medical management

# If TAVI

2<sup>nd</sup> International Meeting  
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- urgent / semi-urgent?
- Which valve?: 1. Edwards / 2. Medtronic
- Which access?:
  1. Left femoral?
  2. Left subclavian?
  3. Right subclavian?
  4. Transthoracic?
  5. Transapical?

# Case 2

2<sup>nd</sup> International Meeting  
on Aortic Diseases  
New insights into an old problem  
September 30 & October 1-2 2010  
Liège, Belgium

- 85yrs, female
- Rheumatic heart disease in young
- CABG (1996): LIMA, SVG 1stD, SVG RCA
- Mitral valve replacement (bioprosthesis) in 2004
- Rheumatoid arthritis since 2003
- L4-L5 laminectomy
- Thyroid nodule resected + radioiodine in '69



- Symptoms: Progression of dyspnea: NYHA 2b
- Med's:

Bisoprolol, valsartan/chlorothiazide, ASA,  
simvastatine, ranitidine, l-thyroxine,

- Clinical exam.:

70kg, 162cm. O<sup>2</sup>sat: 96%

HR:64/min; BP: 160/80mmHg

No signs of heart failure

SEGA score: 10/26

- ECG: PR: 180msec; LVH



- Lab tests (09/08):

Hb: 14.0g/dl

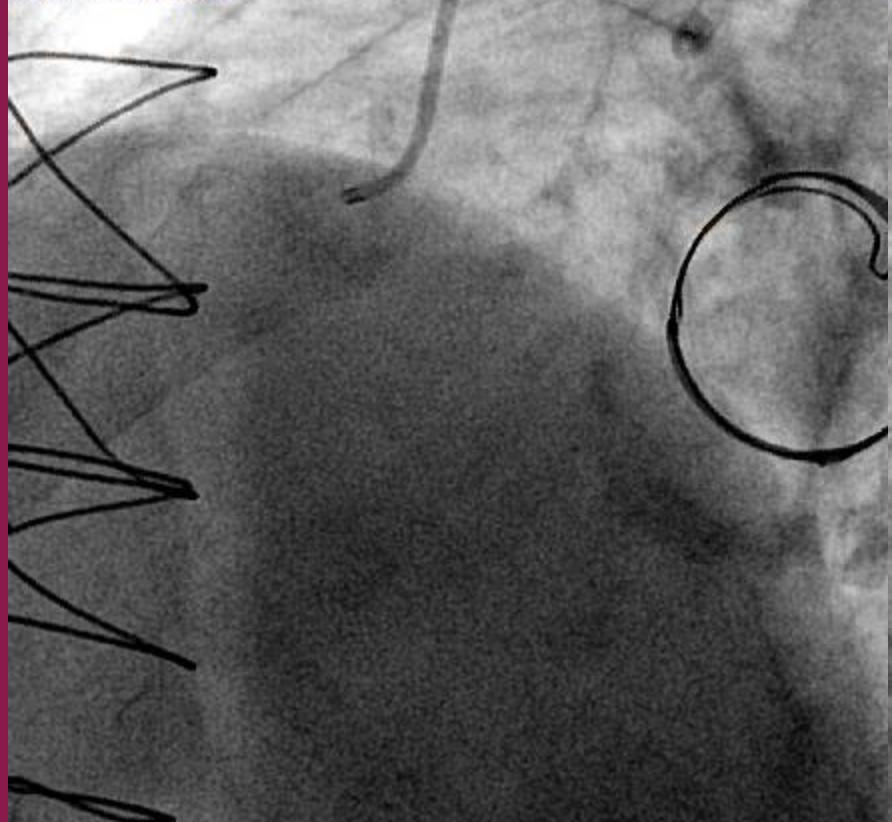
Creat: 10.4mg/L, GFR: 50ml/min

Glycemia: 0.97g/L

CRP: 3 mg/L



COLIN, SUZY  
0113601Q  
I: 1/31/1927  
Run 1 - Frame 1 / 66



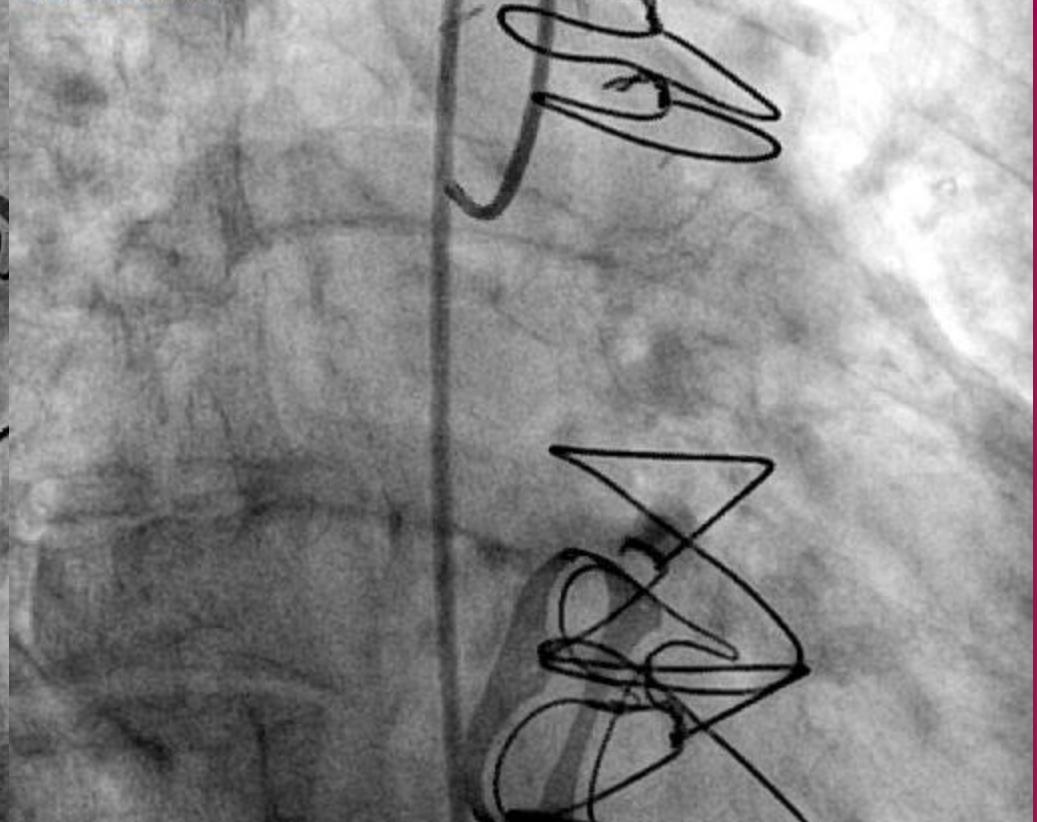
LAO 45,0°  
Cranial 0,0°

L 148  
W 115

RAO -25,6°  
Caudal -0,1°

L 129  
W 160

COLIN, SUZY  
10113601Q  
I: 1/31/1927  
Run 3 - Frame 1 / 66



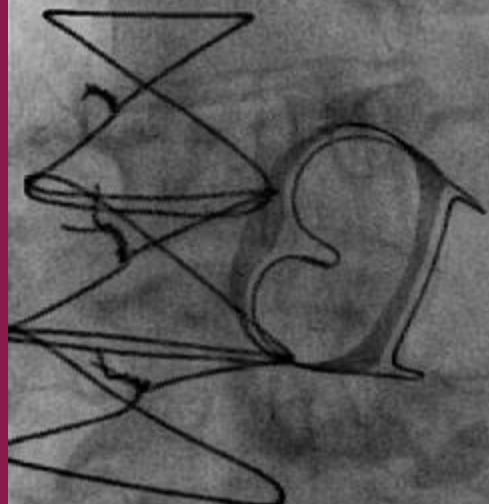
RAO -25,6°  
Caudal -0,1°

CAP-3-XAD4  
80,1kV, - mAs  
Zoom 100%

9:11 AM  
3/8/2012



COLIN, SUZY  
0113601Q  
F 1/31/1927  
Run 7 - Frame 1 / 70



RAO -0,9°  
Caudal -0,5°

L 129  
W 193

COLIN, SUZY  
0113601Q  
F 1/31/1927  
Run 13 - Frame 1 / 70



LAO 44,9°  
Caudal -29,7°

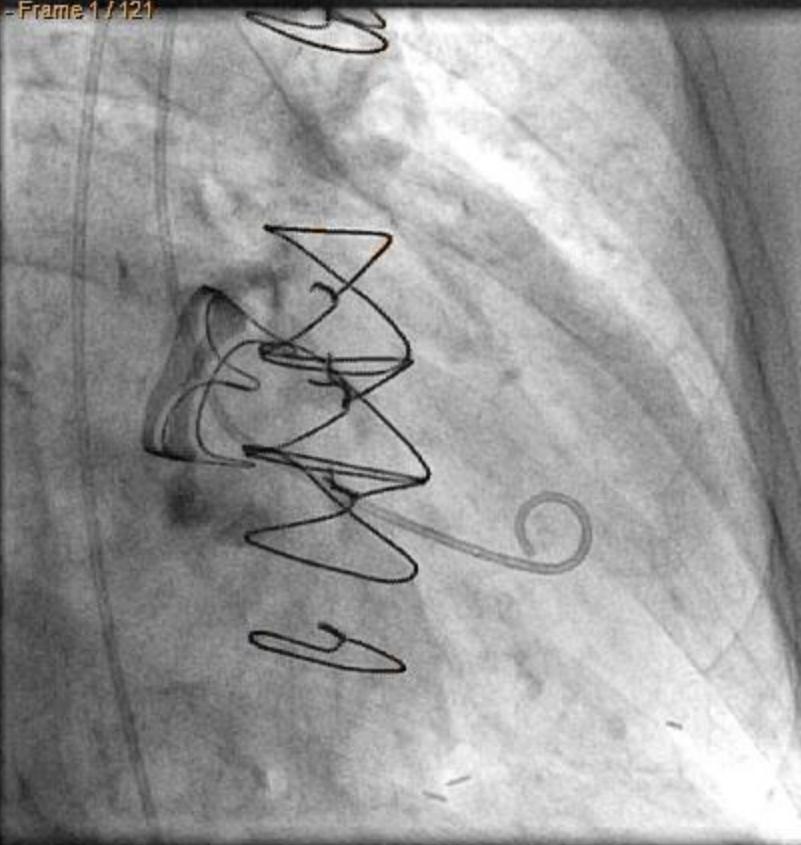
L 145  
W 111

CAR-s-XA04  
112,9kV, - mAs  
Zoom 100%

9:18 AM  
8/8/2012



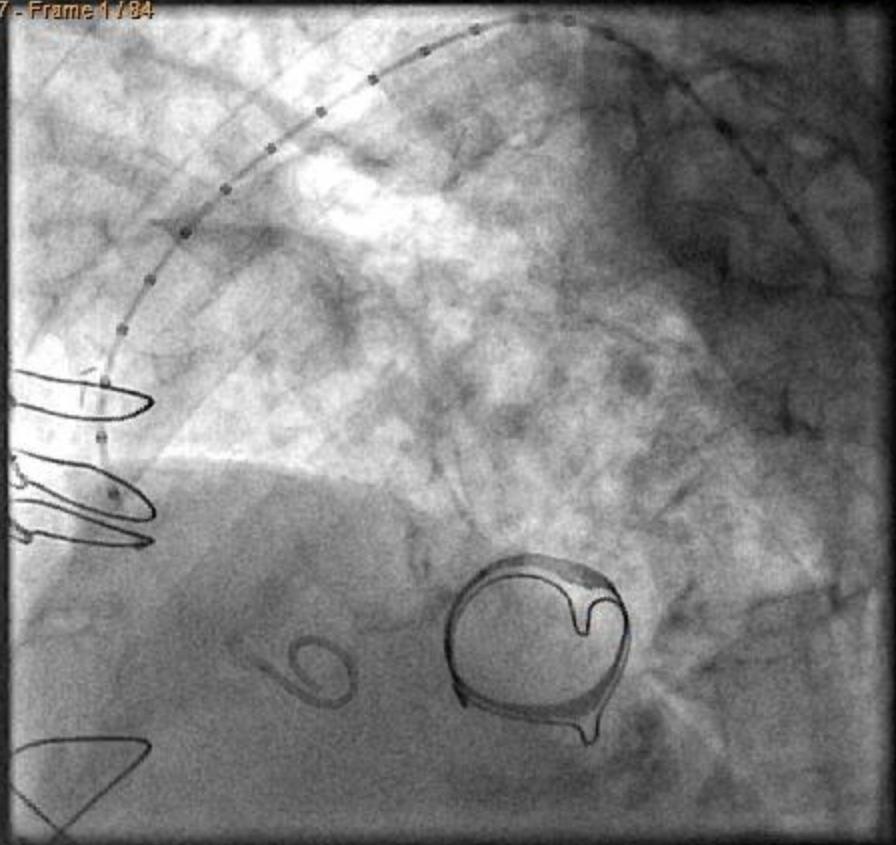
COLIN, SUZY  
0113601Q  
F 1/31/1927  
Run 14 - Frame 1 / 121



RAO -30,2°  
Caudal -0,1°

L 105  
W 180

COLIN, SUZY  
0113601Q  
F 1/31/1927  
Run 17 - Frame 1 / 84



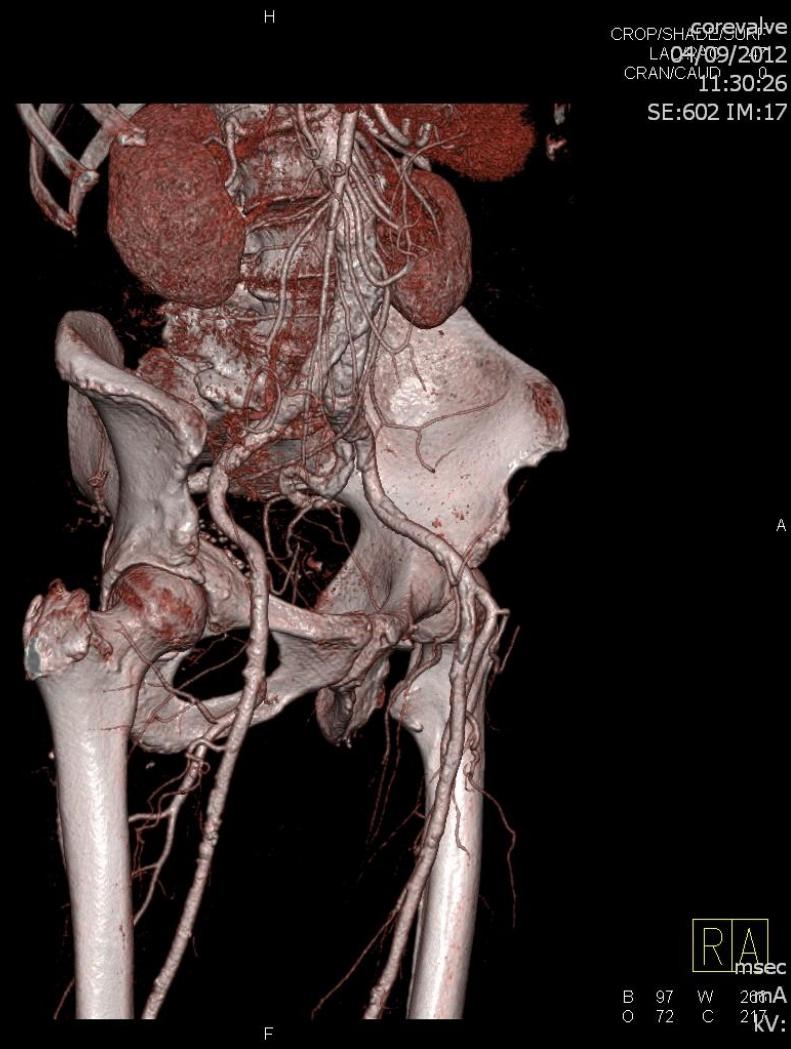
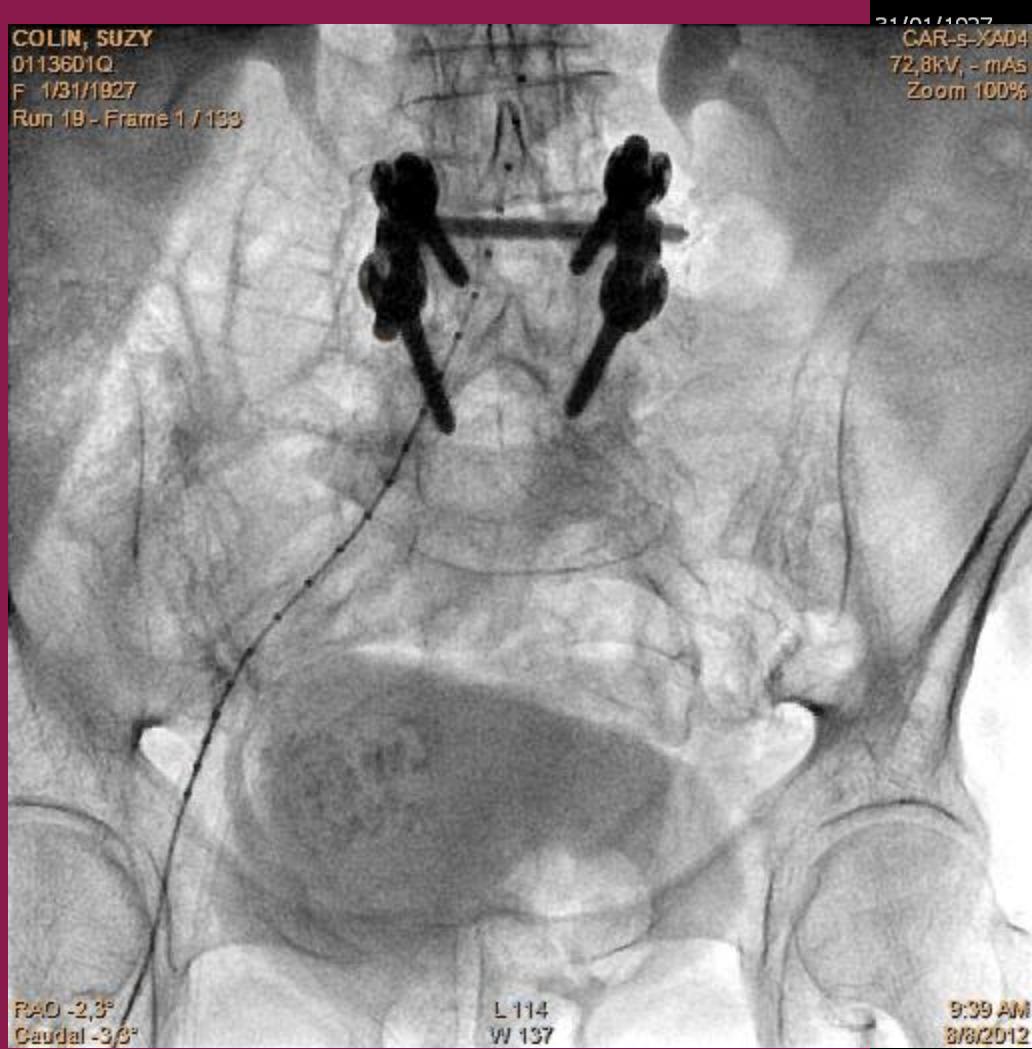
LAO 43,5°  
Cranial 21,2°

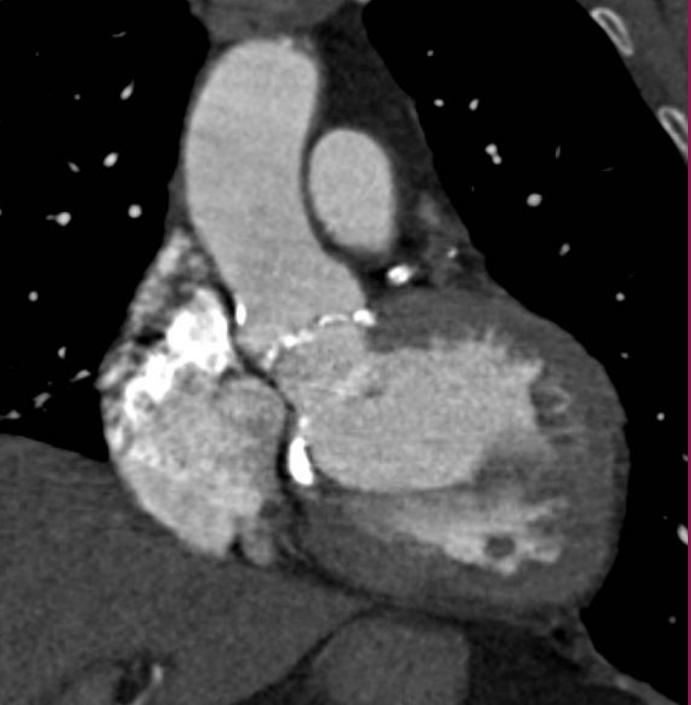
L 103  
W 161

9:37 AM  
8/8/2012



COLIN, SUZY  
0113601Q  
F 1/31/1927  
Run 19 - Frame 1 / 133

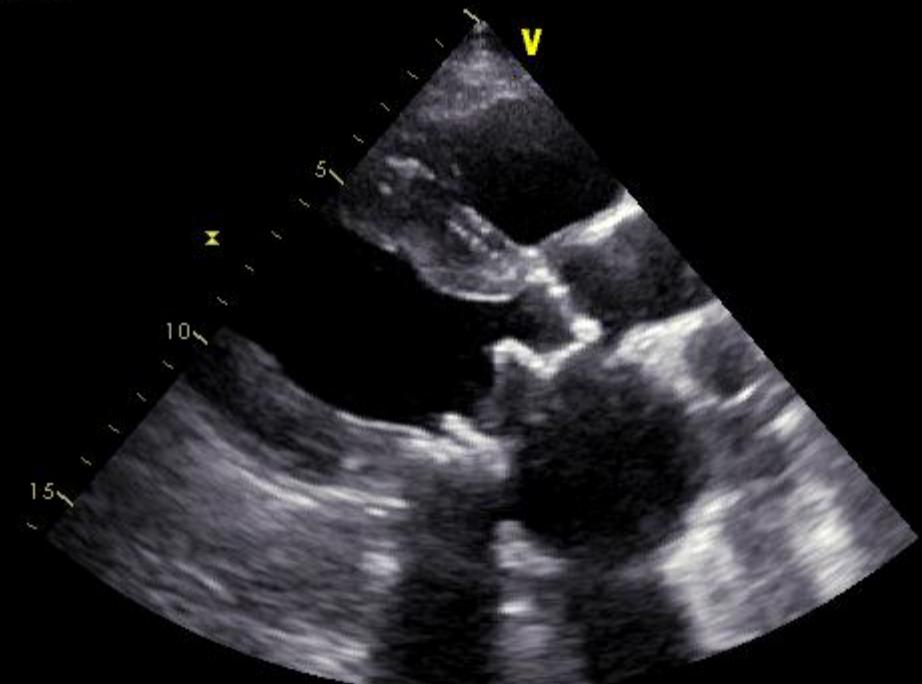




**Ao gradient: 37mmHg**  
**Ao Area: 0.60cm<sup>2</sup>**  
**CO: 3.75L/min**  
**PCWP: 25mmHg**  
**Mean AP: 35mmHg**



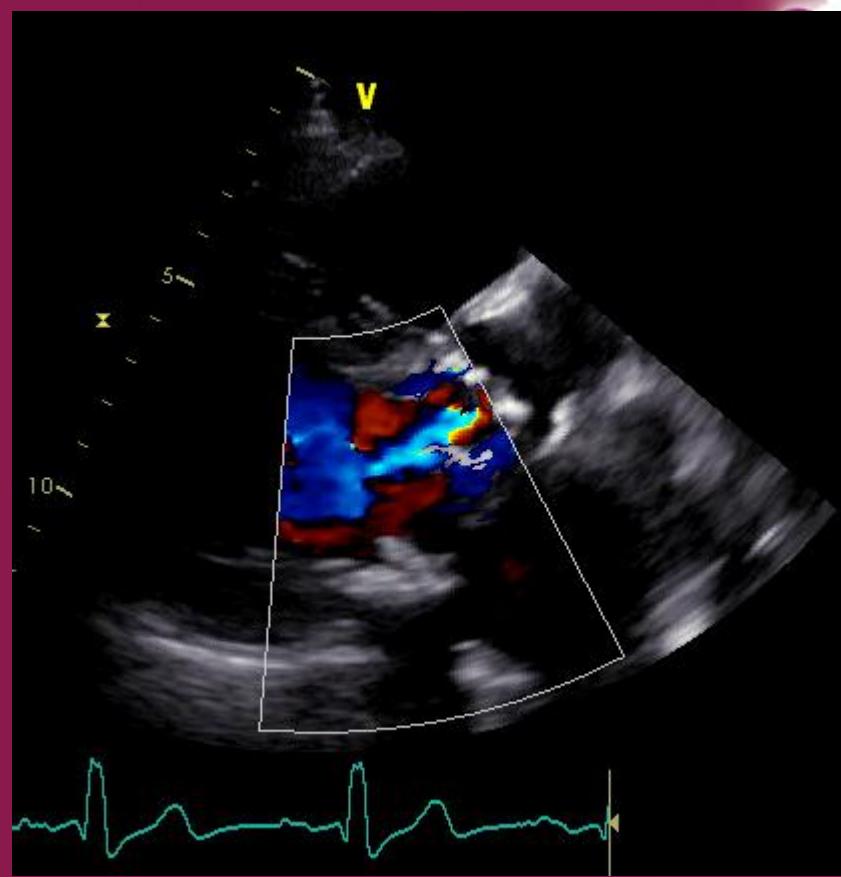
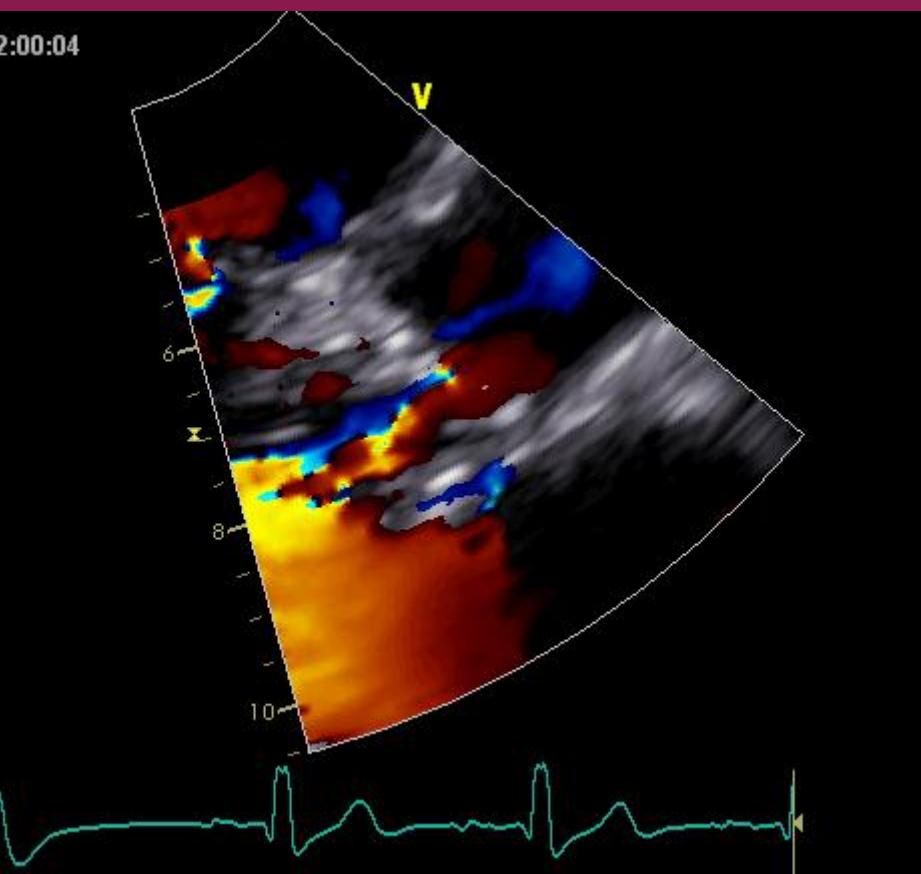
1:53:58



1:55:14



2:00:04



**Mitral prosthesis: mean gradient: 7.7mmHg**

**Severe aortic stenosis: mean gradient: 39mmHg, Area: 0.7cm<sup>2</sup>**

**Ao regurgitation: moderate (RV: 20ml, SOR: 11mm<sup>2</sup>)**

**GTT: 50mmHg**

**Normal LV function: LVEF: 61%**



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# If TAVI

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- Which valve?:
  1. Edwards
  2. Medtronic
- Predilatation with balloon: 1.Yes 2.No
- Which access?:
  1. Left femoral?
  2. Left subclavian?
  3. Transthoracic?
  4. Transapical?

# Case 3

2<sup>nd</sup> International Meeting  
on Aortic Diseases  
New insights into an old problem  
September 30 & October 1-2 2010  
Liège, Belgium

- 75yrs, male
- Type 2 diabetes, insuline
- Severe COPD Gold 3, hypoxemia. VEMS: 1.23L (44%) CPT: 5.74L (88%)
- Cardiomyopathy (LVEF<35%), LBBG
- Recurrent hospitalizations for cardiopulmonary decompensation consecutive to AF / bronchopneumonia



- Med's: bumetanide, disosorbide dinitrate, ASA, amiodarone, bisoprolol, perindopril, coumadine, simvastatine, combivent, seretide, spiriva, O<sup>2</sup>, ranitidine, L-Thyroxine, Insulin (novorapid + levemir)

- Clinical exam.:

Admitted on 10/09 because of dyspnea.

bronchopneumonia of left lower lobe

72kg, 174cm. O<sup>2</sup>sat: 85%

HR:107/min; BP: 100/60mmHg

- SEGA score: 12/26



- Lab tests (18/09):

Hb: 11.9g/dl

Creat: 21.6mg/L, GFR: 30ml/min

Uricemia: 131 mg/dl

Glycemia: ~1.5g/L

CRP: 60mg/L

SGTO:238 UI/L

usTnT: 3027 (nl:<14) ng/ml

Comments: GFR 45ml/min on 03/09

**2<sup>nd</sup> International Meeting  
on Aortic Diseases**

New insights into an old problem

September 30 & October 1-2 2010

Liège, Belgium



**LAURANT, PAUL**  
0596609Z  
M 6/15/1937  
Run 1 - Frame 1 / 82

**CAR-s-XAD4**  
111,7kV, - mAs  
Zoom 100%  
**LAURANT, PAUL**  
0596609Z  
M 6/15/1937  
Run 3 - Frame 1 / 81

**CAR-s-XAD4**  
116,4kV, - mAs  
Zoom 100%

RAO -1,3°  
Caudal -8,7°

L 151  
W 154

12:07 PM RAO -0,1°  
9/3/2012 Cranial 30,2°

L 150  
W 121

12:08 PM  
9/3/2012



LAURANT, PAUL  
0598609Z  
M 6/15/1937  
Run 7 - Frame 1 / 150



RAO -30,1°  
Caudal 0,0°

L 125  
W 123

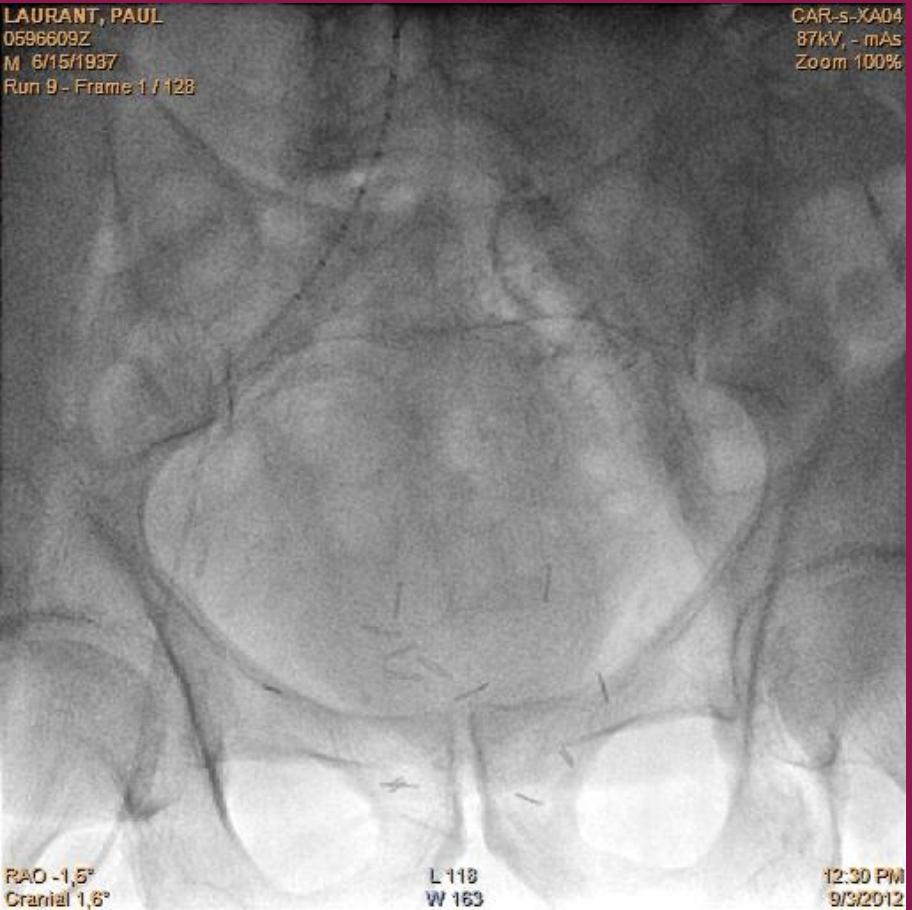
12:26 PM LAO 18,7°  
9/3/2012 Cranial 24,5°

L 134  
W 76

12:29 PM  
9/3/2012

CAR-5-XA04  
95,3kV, - mAs  
Zoom 100% M 6/15/1937  
Run 8 - Frame 1 / 150





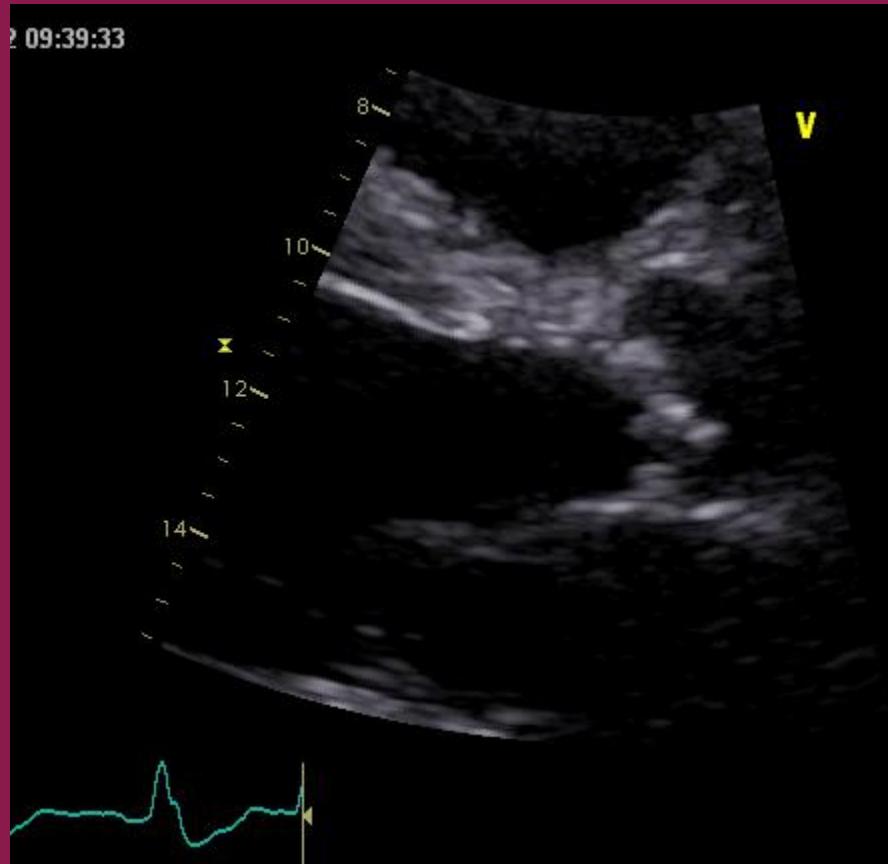
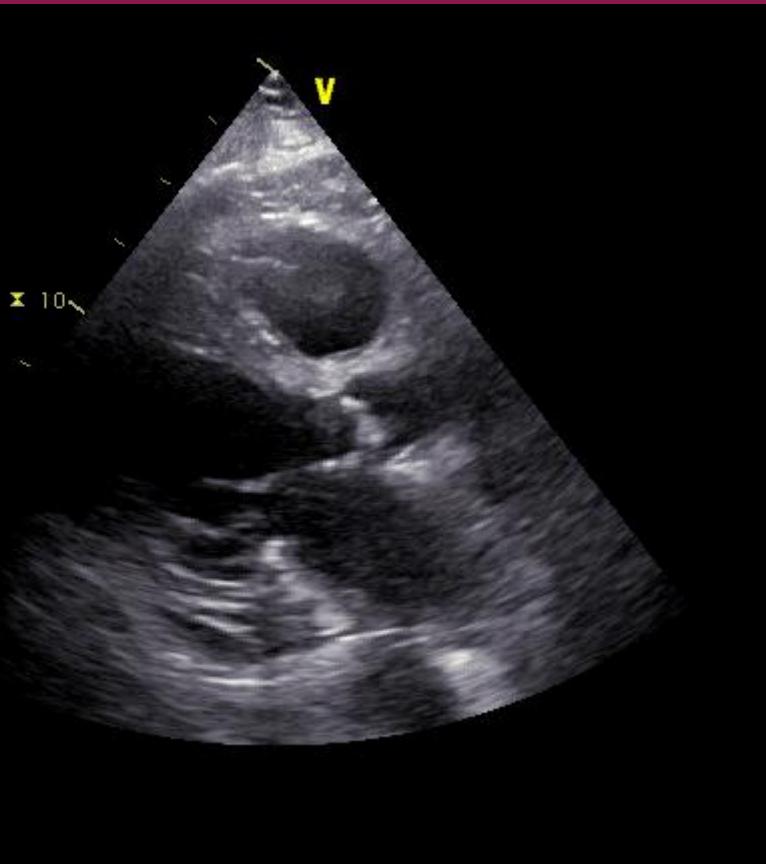
- LVEF: 18%
- Mean Ao gradient: 46mmHg
- Ao V area: 0.7cm<sup>2</sup>
- CI: 2.15L/min/m<sup>2</sup>
- PCWP: 39mmHg
- PAP: 70/33 (mean:49)mmHg

2<sup>nd</sup> International Meeting  
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New insights into an old problem

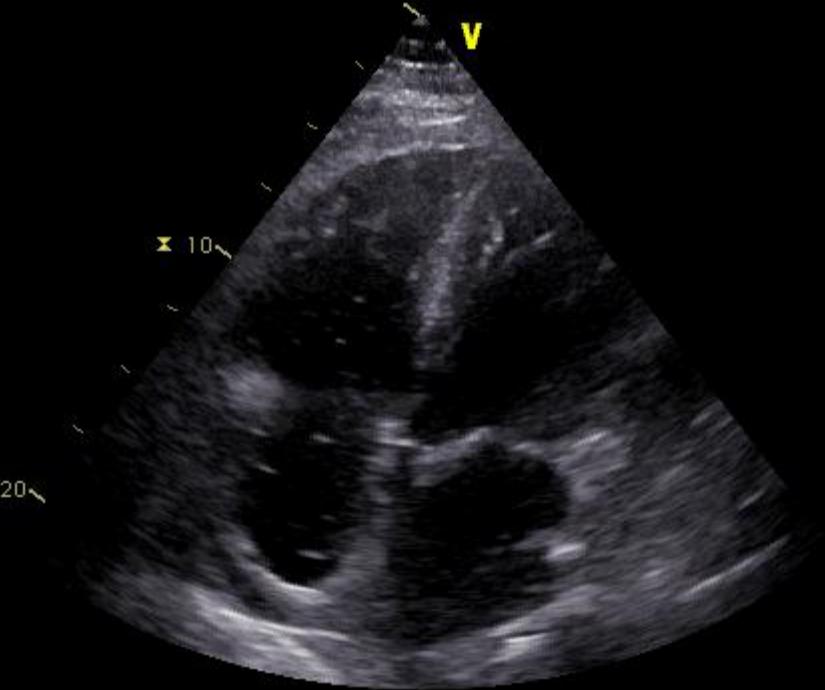
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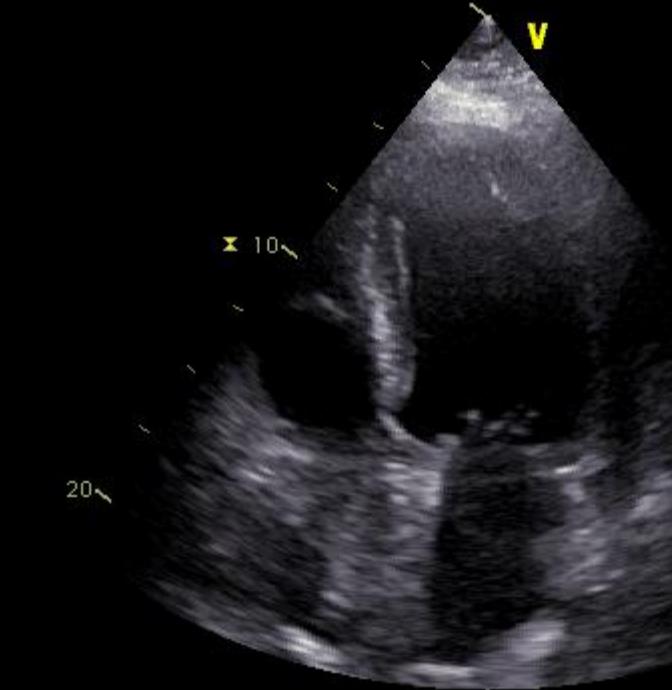
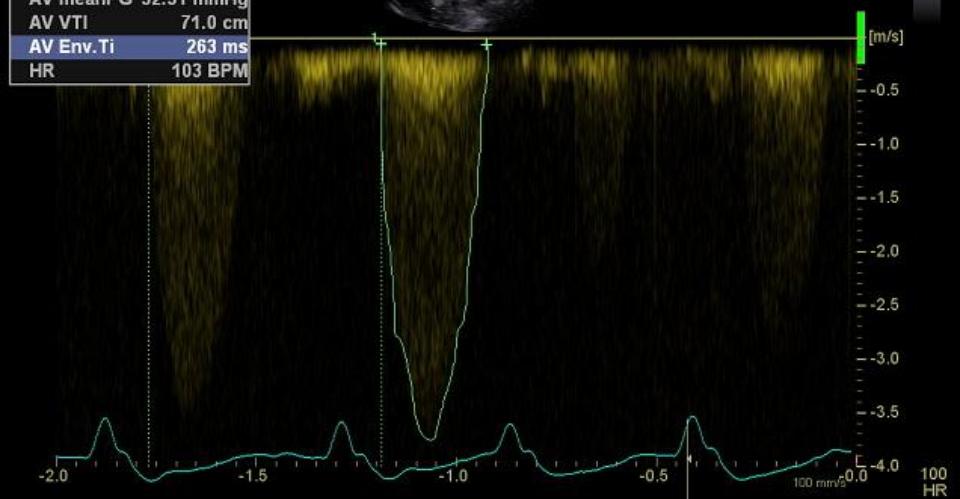


00

09:37:03



AVA Vmax	0.4 cm <sup>2</sup>
AVA (VTI)	0.5 cm <sup>2</sup>
AV Vmax	3.75 m/s
AV Vmean	2.70 m/s
AV maxPG	56.29 mmHg
AV meanPG	32.51 mmHg
AV VTI	71.0 cm
AV Env.Ti	263 ms
HR	103 BPM



CTO	AV Vmax	4.30 m/s
	AV Vmean	3.08 m/s
	AV maxPG	74.10 mmHg
	AV meanPG	42.72 mmHg
	AV VTI	93.8 cm
	AV Env.Ti	304 ms
	HR	197 BPM





1. Surgery
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- Additionnal test:

1. CT scan
2. MRI
3. None