

PPVI 3DRA – case presentation:

# Venus P-Valve in Native RVOT with 3DRA Guidance



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Disclosure

Medtech consultant

12 years old, girl, weight: 59 kg

Diagnosis: TOF

Surgery: #1, - 7 months old, transanular patch

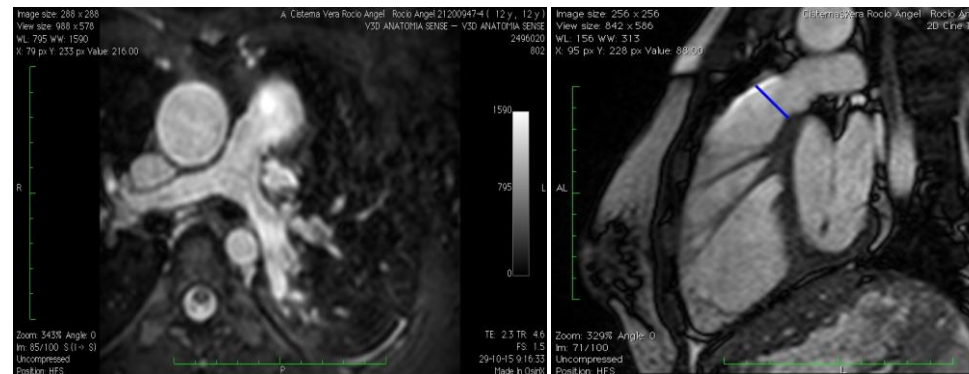
MRI:	<u>RVEDV 179 ml/m<sup>2</sup></u>	LVEDV 110 ml/m <sup>2</sup>
	RVESV 86 ml/m <sup>2</sup>	LVESV 33 ml/m <sup>2</sup>
	RV EF 52%	LVEF 59%

Pulmonic regurg fraction 58 %

MPA 27 mm

RPA 24 mm

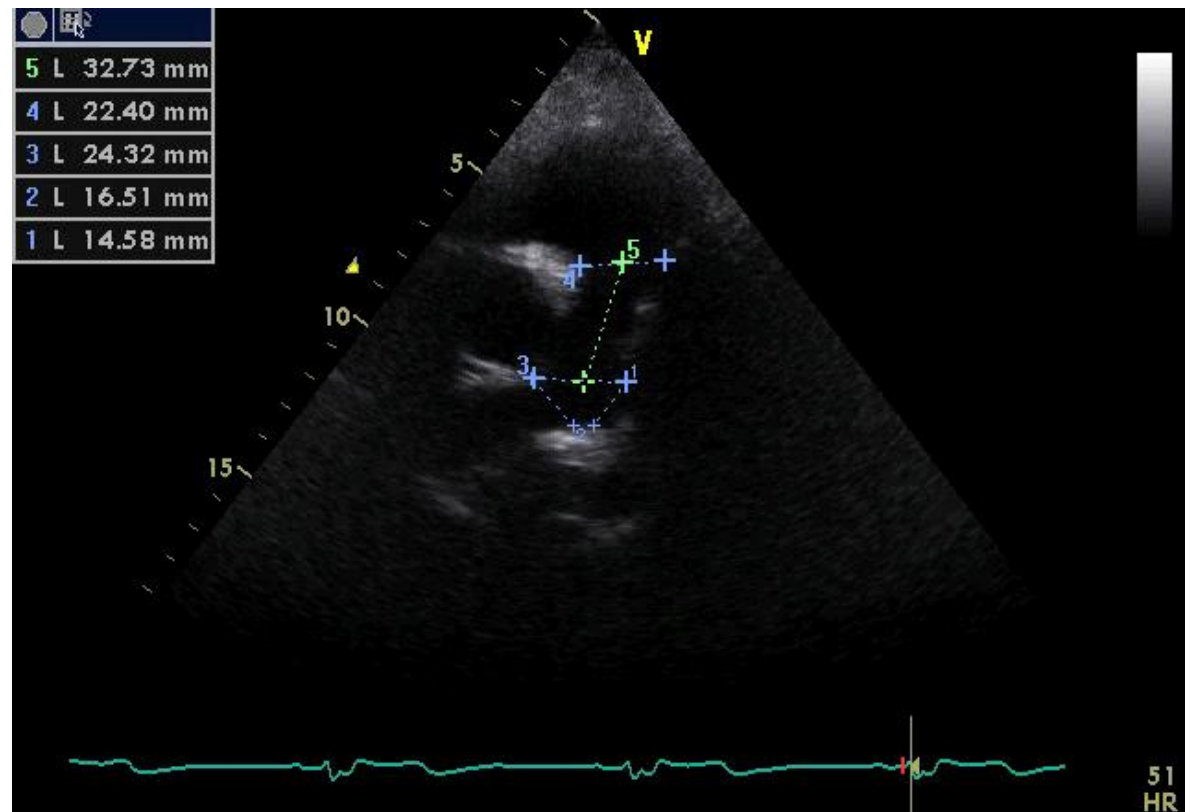
LPA 20 mm



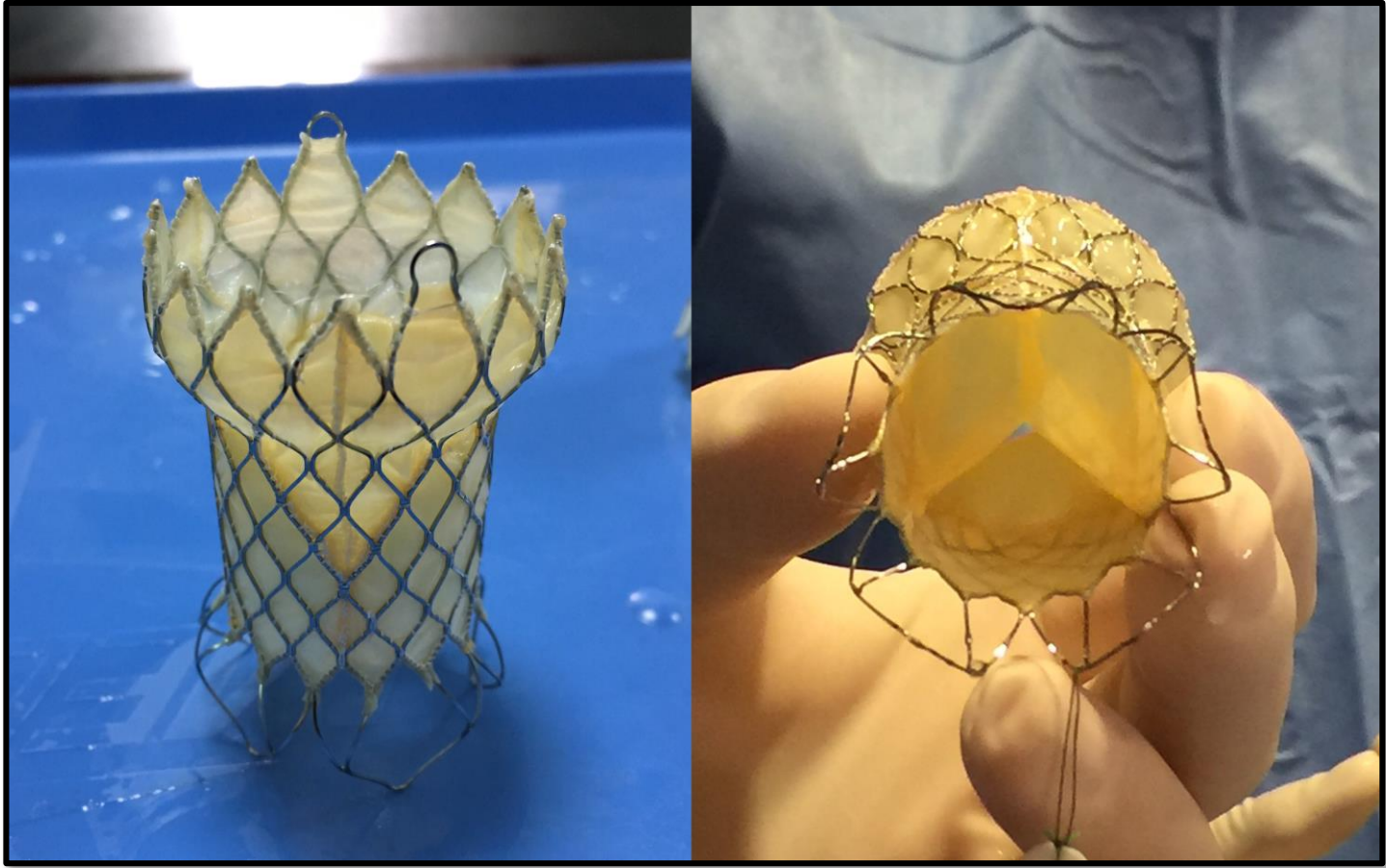
**ECHO** Pulmonary valve annulus 26 mm  
Distal MPA 27.7 mm  
MPA length 36 mm

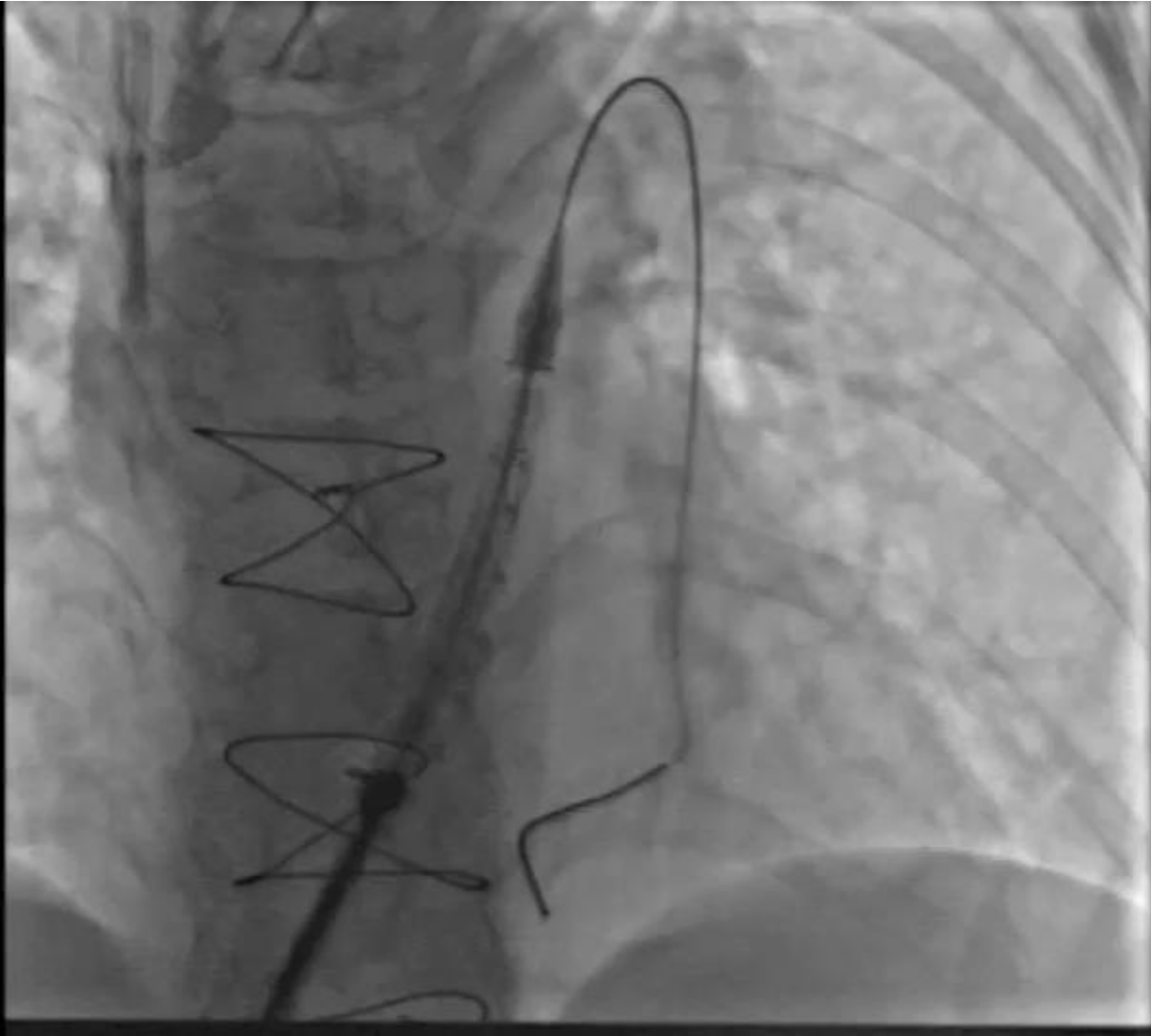
RPA 21.1 mm

LPA 16.6 mm



# Venus p-valve (Medtech, Shanghai)





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# Procedure

Single plane Philips Allura Clarity

General anesthesia, OT intubation

Heparin 100 U/kg

Prophylactic cefazolin

RFV – PM (3DRA)

RVOT sizing/Venus p-valve delivery system

LFV – 3DRA/angio test for valve deployment

LFA – coronary compression test.



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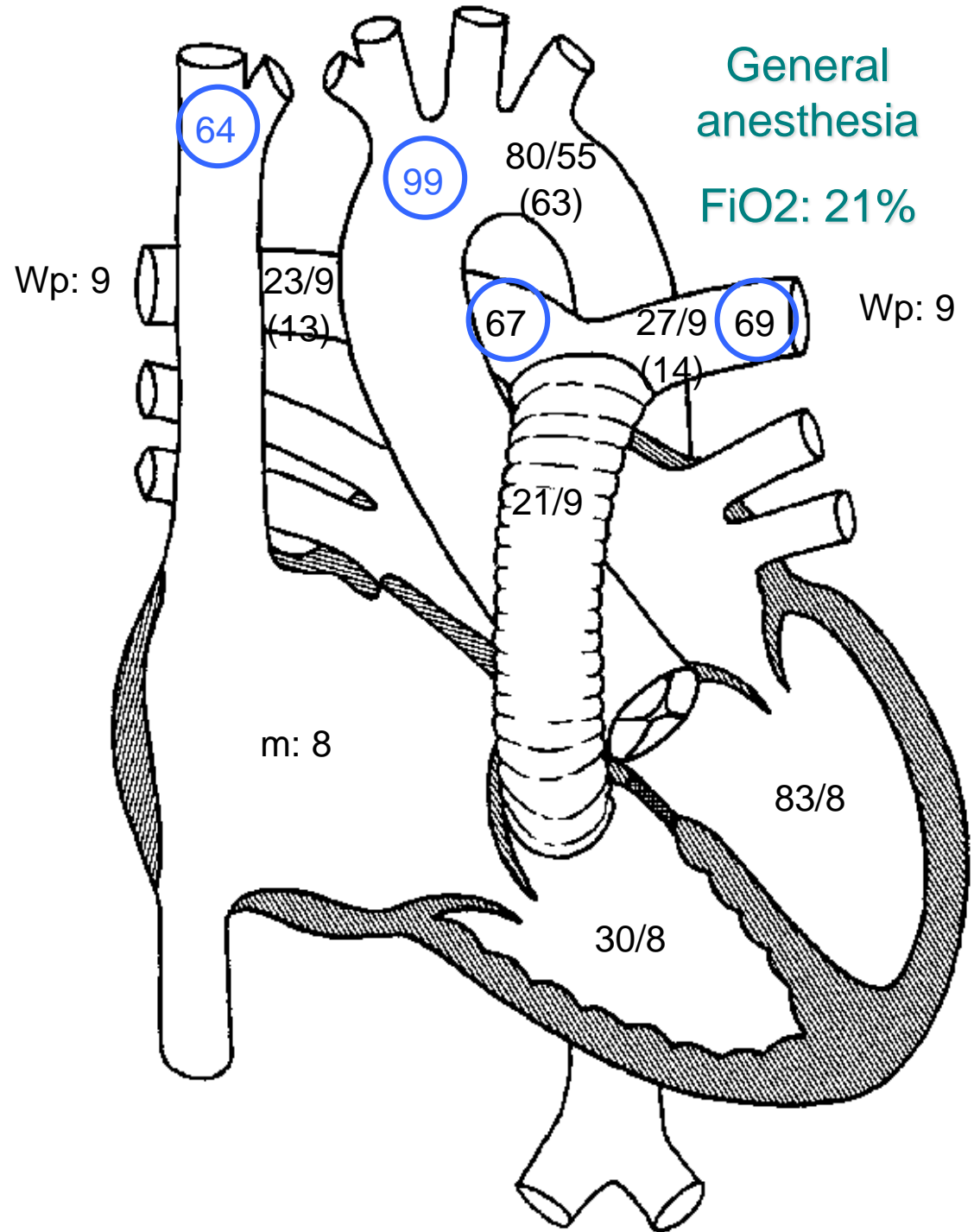


## RCV

- Age: 12 yo.
- Study date: 3/28/2016.
- Weight: 62 Kg; Height: 62 cm.
- BSA: 1.7 m<sup>2</sup>.

### Hemodynamic calculations:

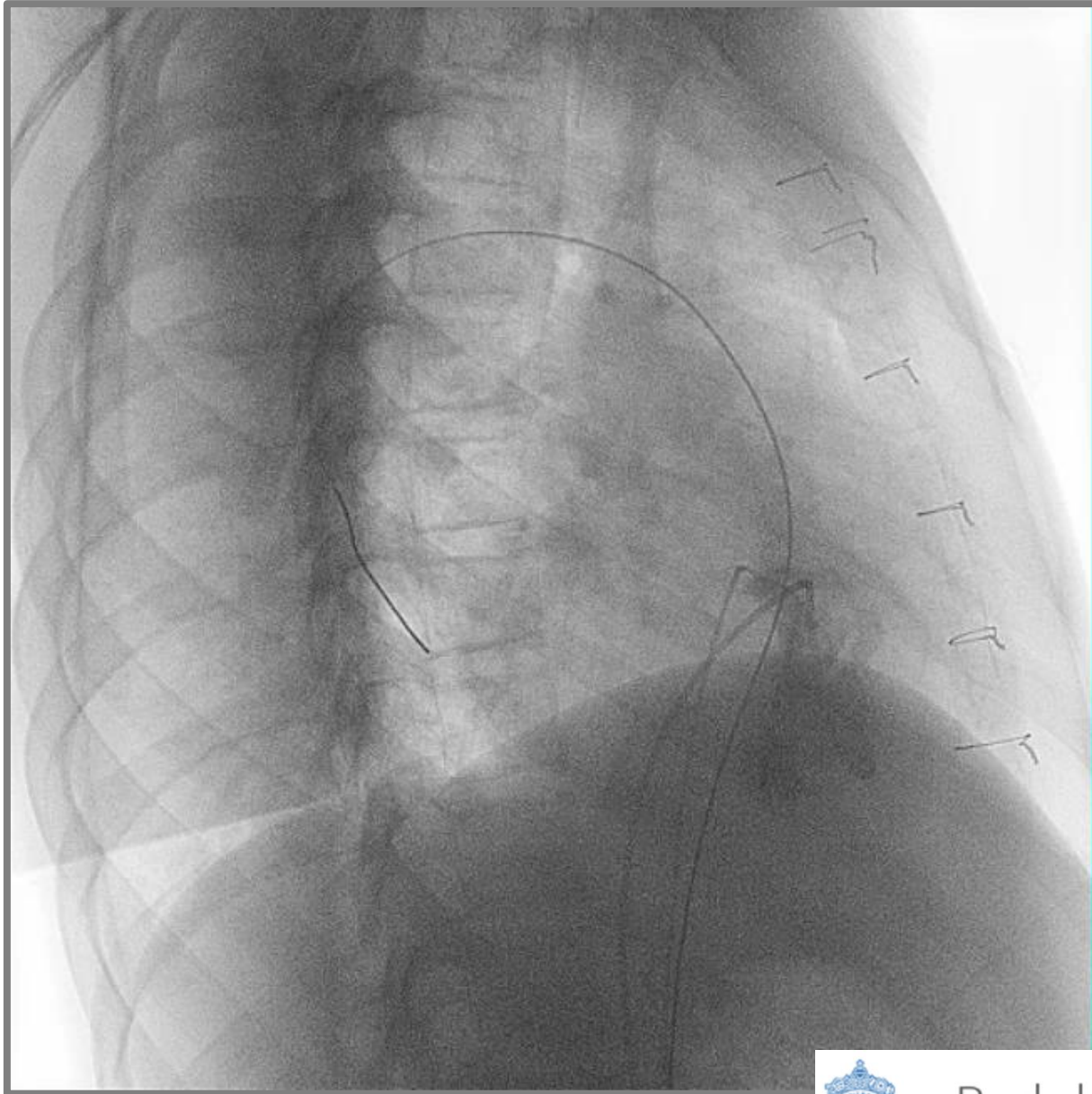
- Qs: 2,4 L/min/m<sup>2</sup>.
- Qp: 2,4 L/min/m<sup>2</sup>.
- Qp/Qs: 1:1
  
- RVS: 23 U. Wood.
- RVP: 2 U. Wood.





# 3DRA setup

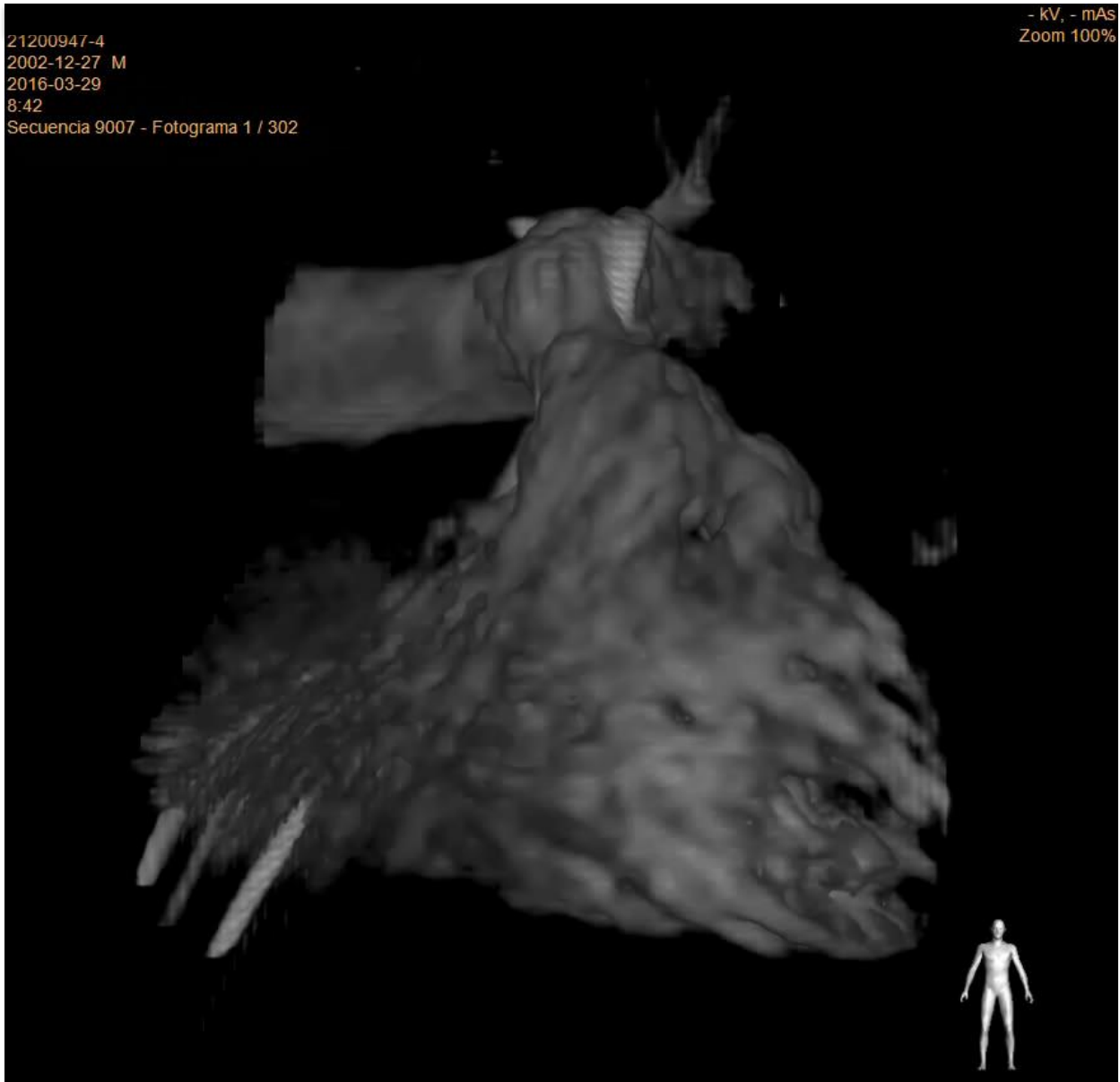




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# RVOT 3D reconstruction

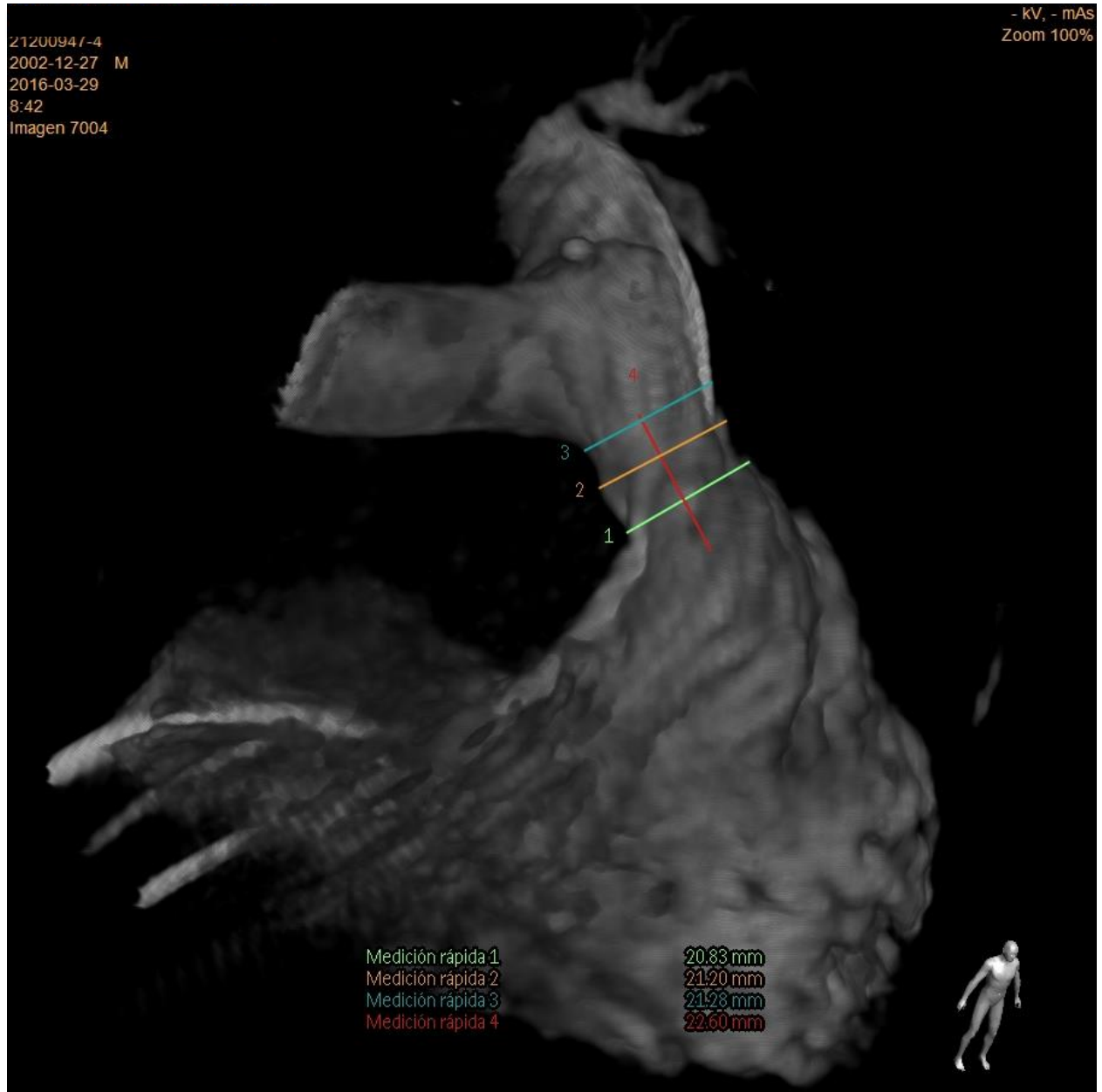


# Cath lab with 3DRA



21200947-4  
2002-12-27 M  
2016-03-29  
8:42  
Imagen 7004

- kV, - mAs  
Zoom 100%

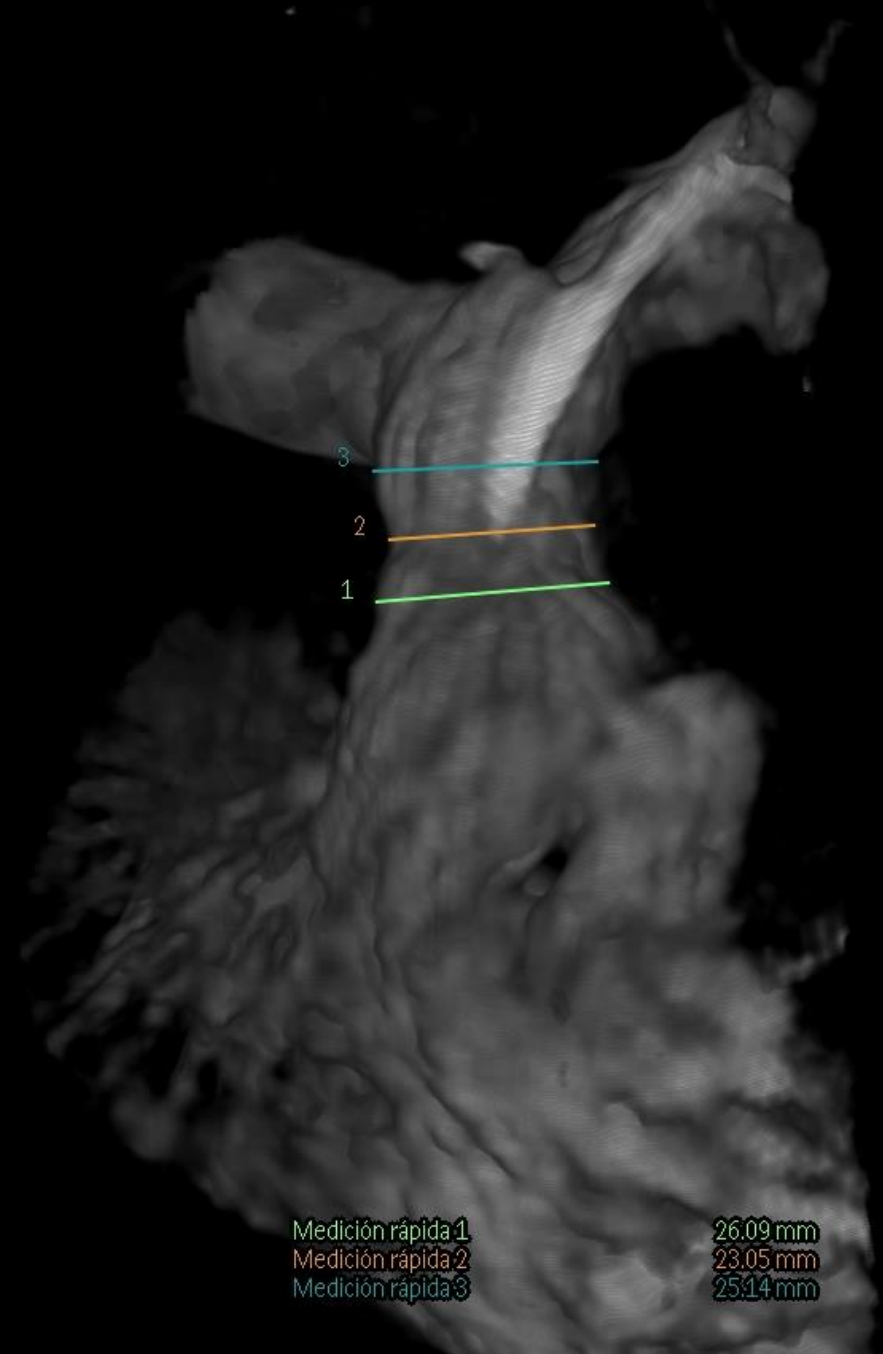


Medición rápida 1  
Medición rápida 2  
Medición rápida 3  
Medición rápida 4

20.83 mm  
21.20 mm  
21.28 mm  
22.60 mm



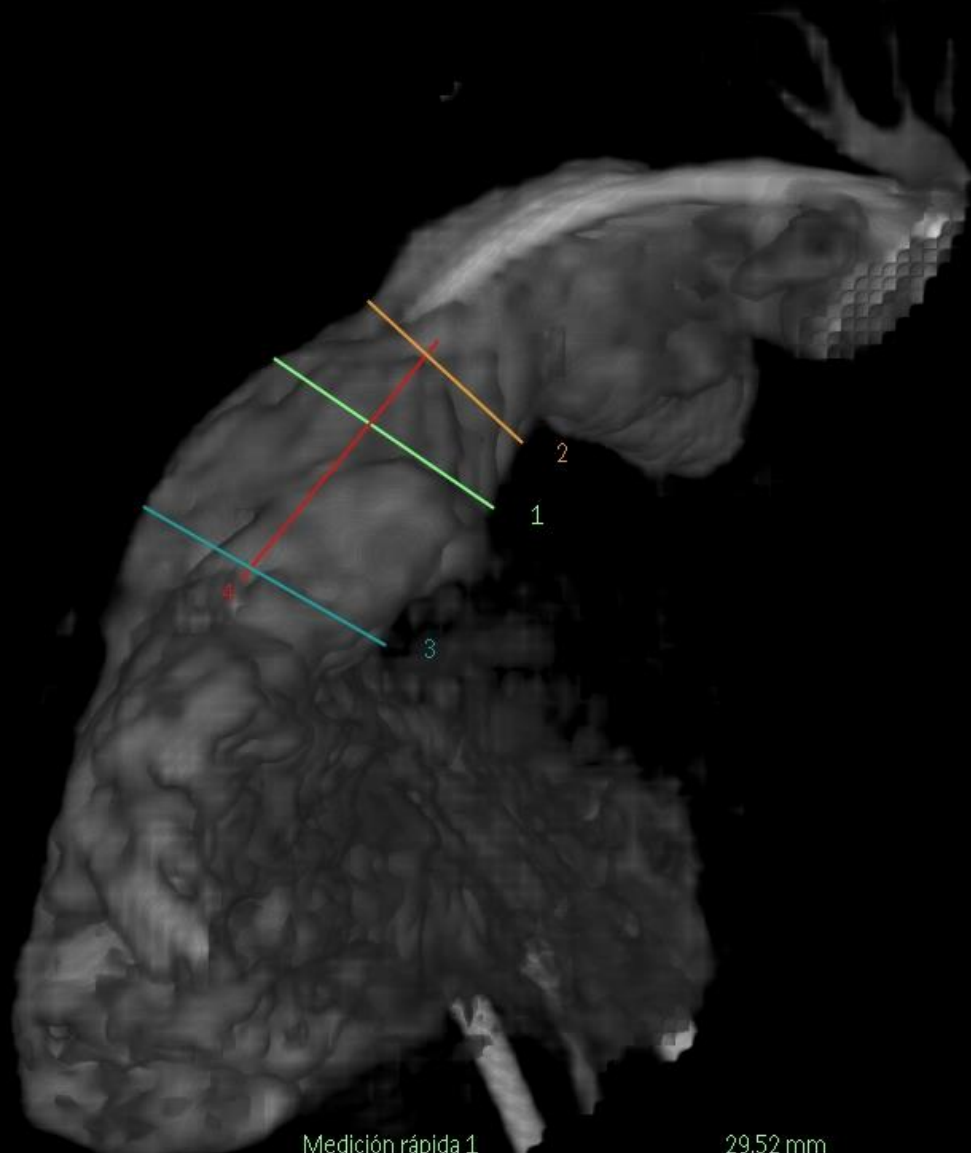
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2002-12-27 M  
2016-03-29  
8:42  
Imagen 7002



Medición rápida 1	26.09 mm
Medición rápida 2	23.05 mm
Medición rápida 3	25.14 mm



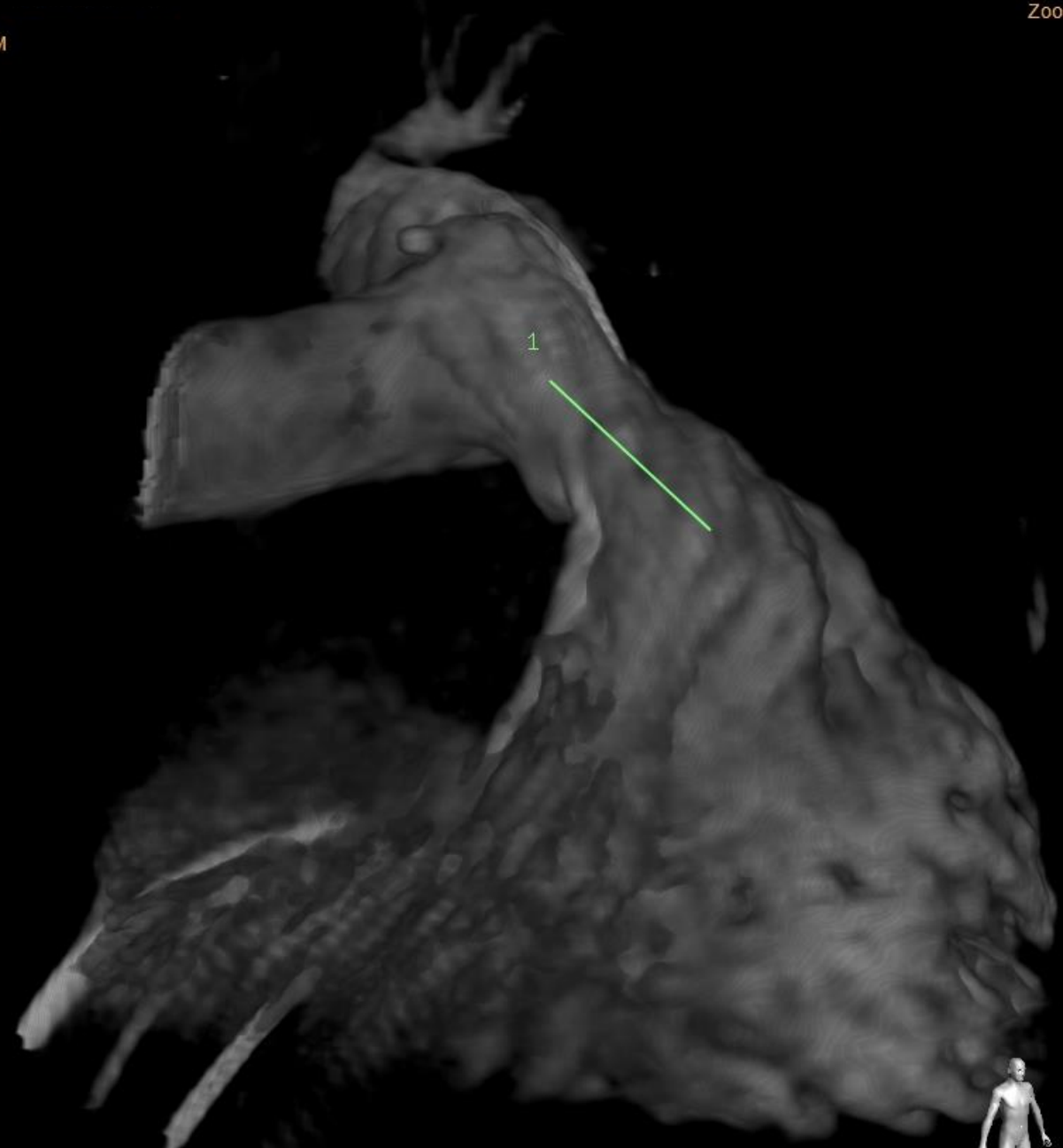
21200947-4  
2002-12-27 M  
2016-03-29  
8:42  
Imagen 7001



Medición rápida 1	29.52 mm
Medición rápida 2	23.27 mm
Medición rápida 3	30.96 mm
Medición rápida 4	34.14 mm



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2002-12-27 M  
2016-03-29  
8:42  
Imagen 7009



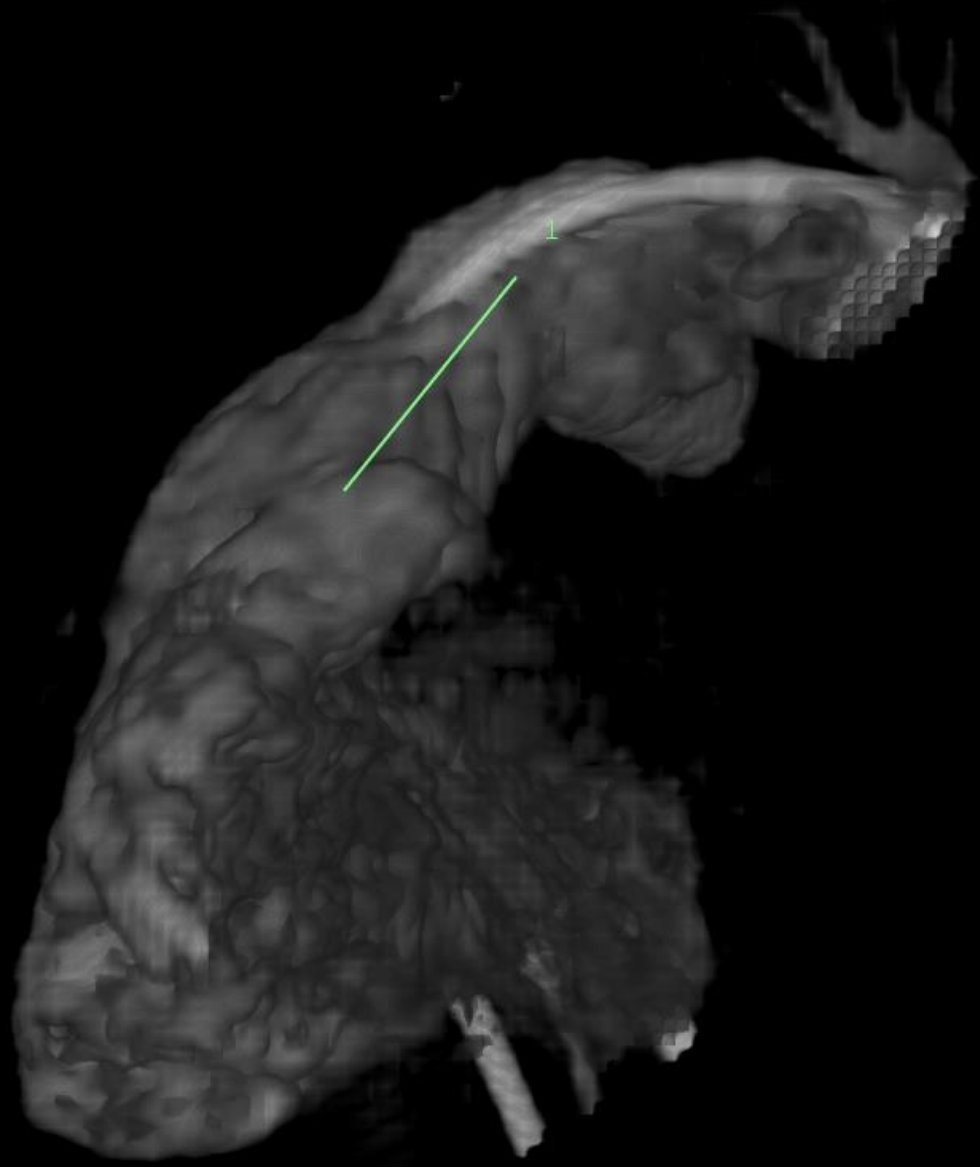
Medición rápida 1

27.51 mm





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2016-03-29  
8:42  
Imagen 7008

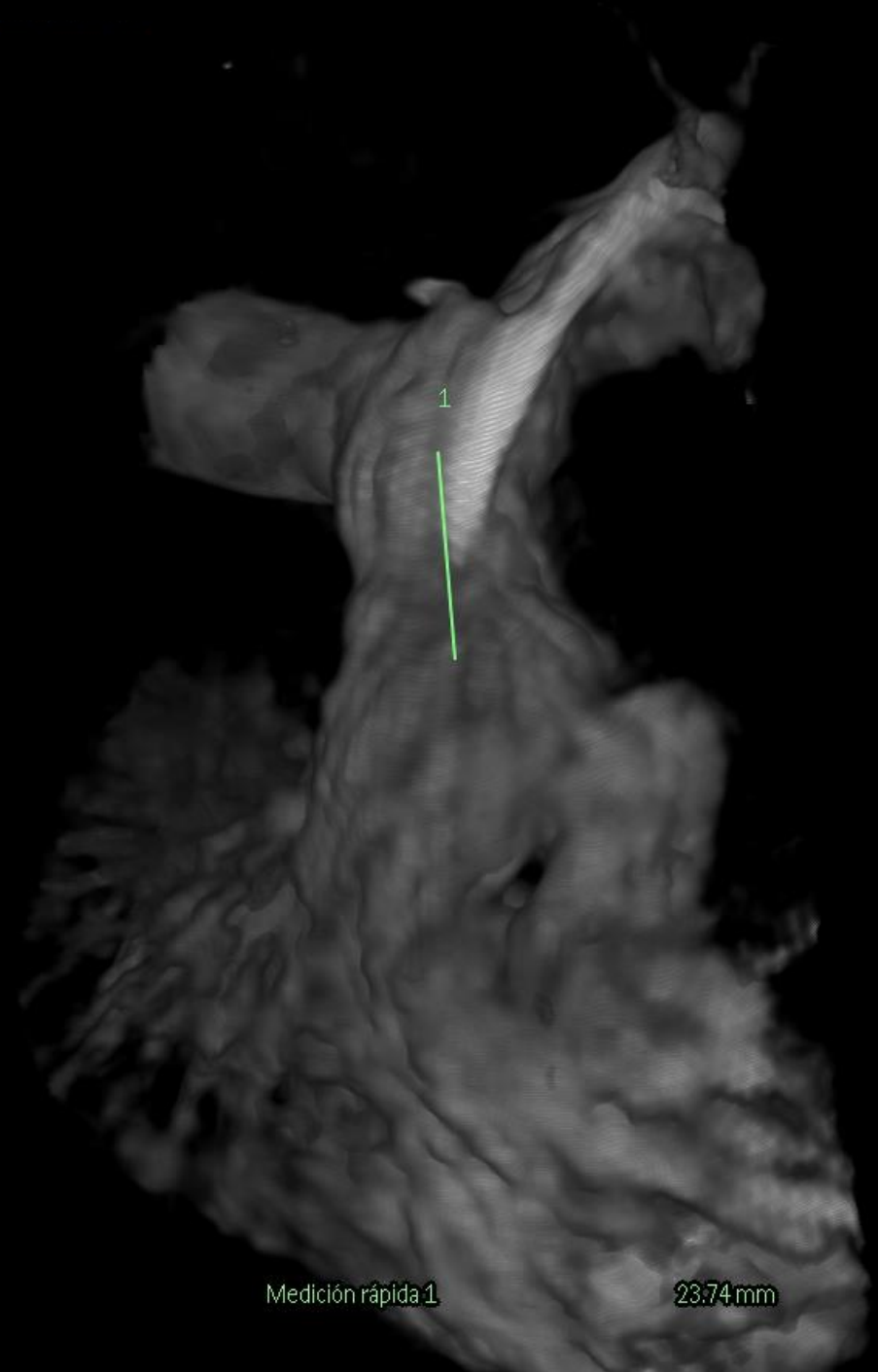


Medición rápida 1

30.41 mm



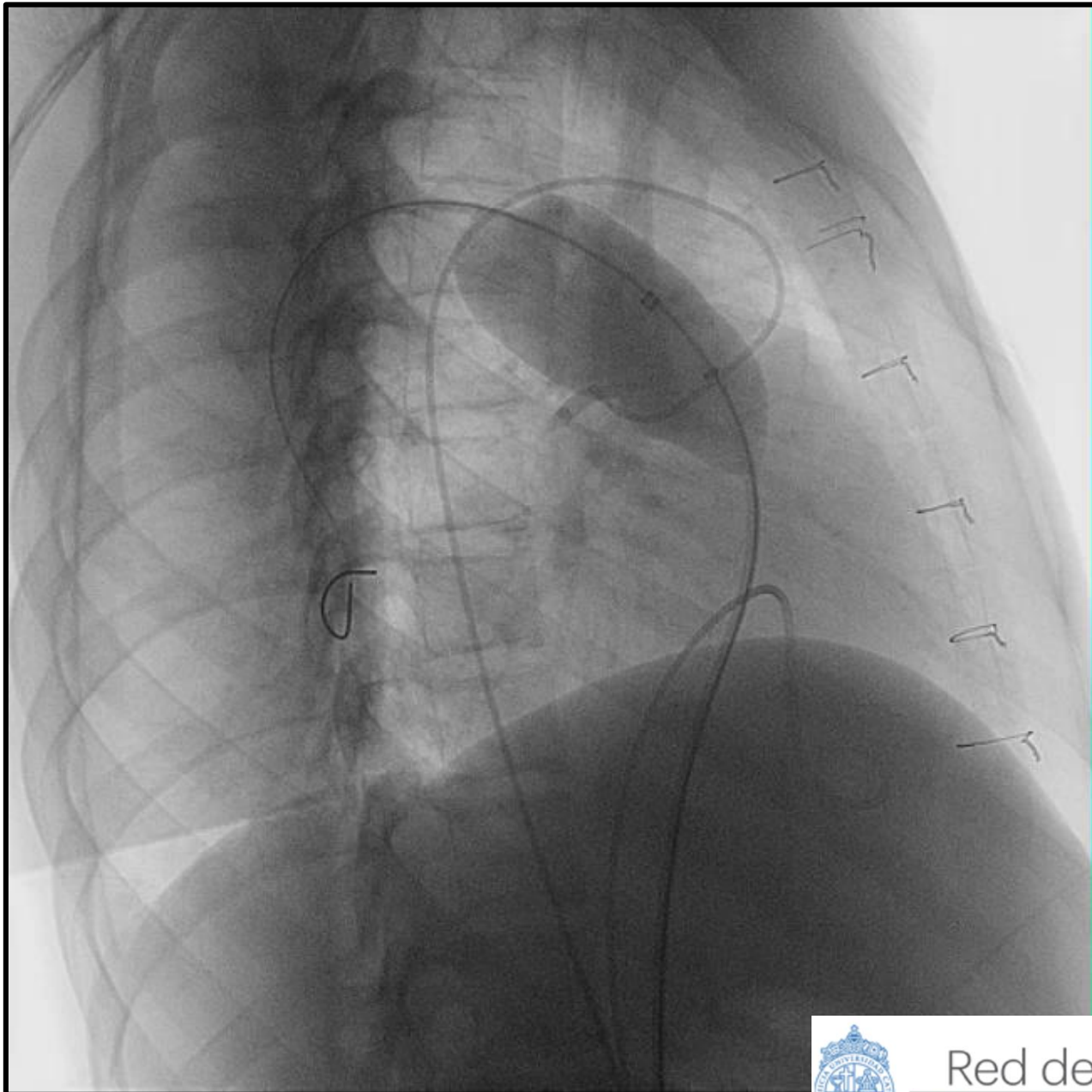
21200947-4  
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2016-03-29  
8:42  
Imagen 7007



Medición rápida 1

23.74 mm



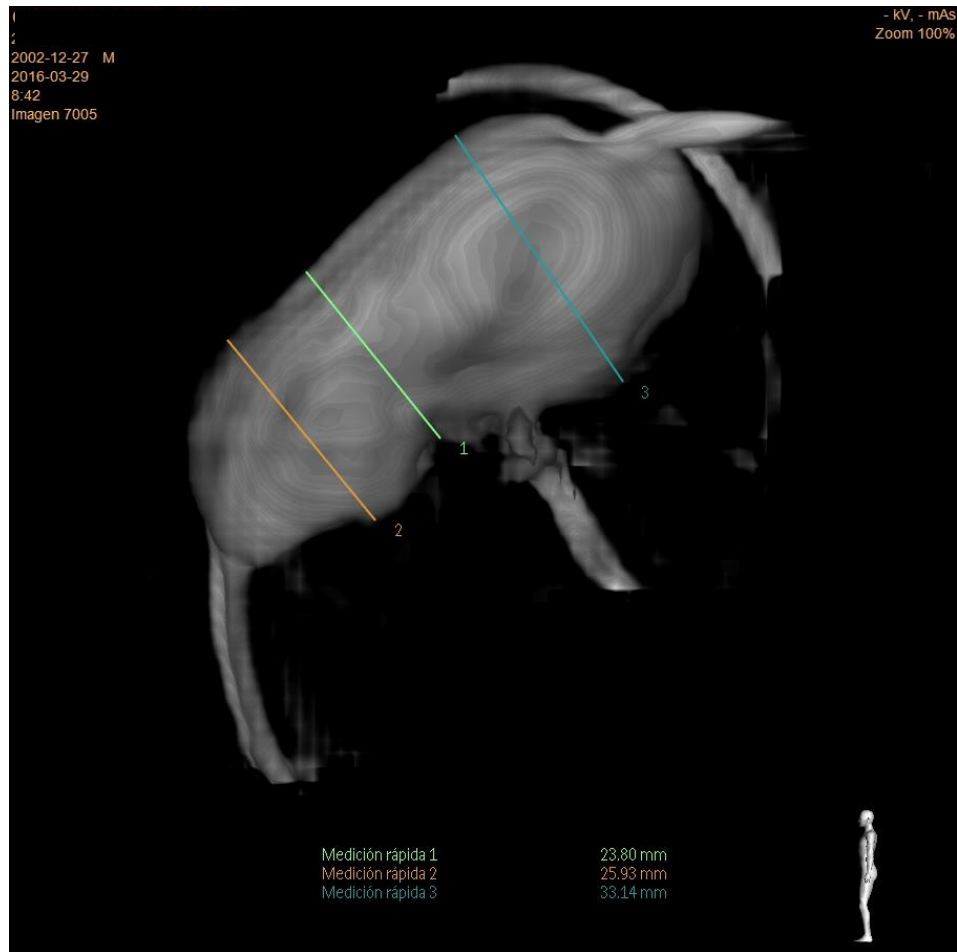


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2002-12-27 M  
2016-03-29  
8:42  
Secuencia 9029 - Fotograma 1 / 213





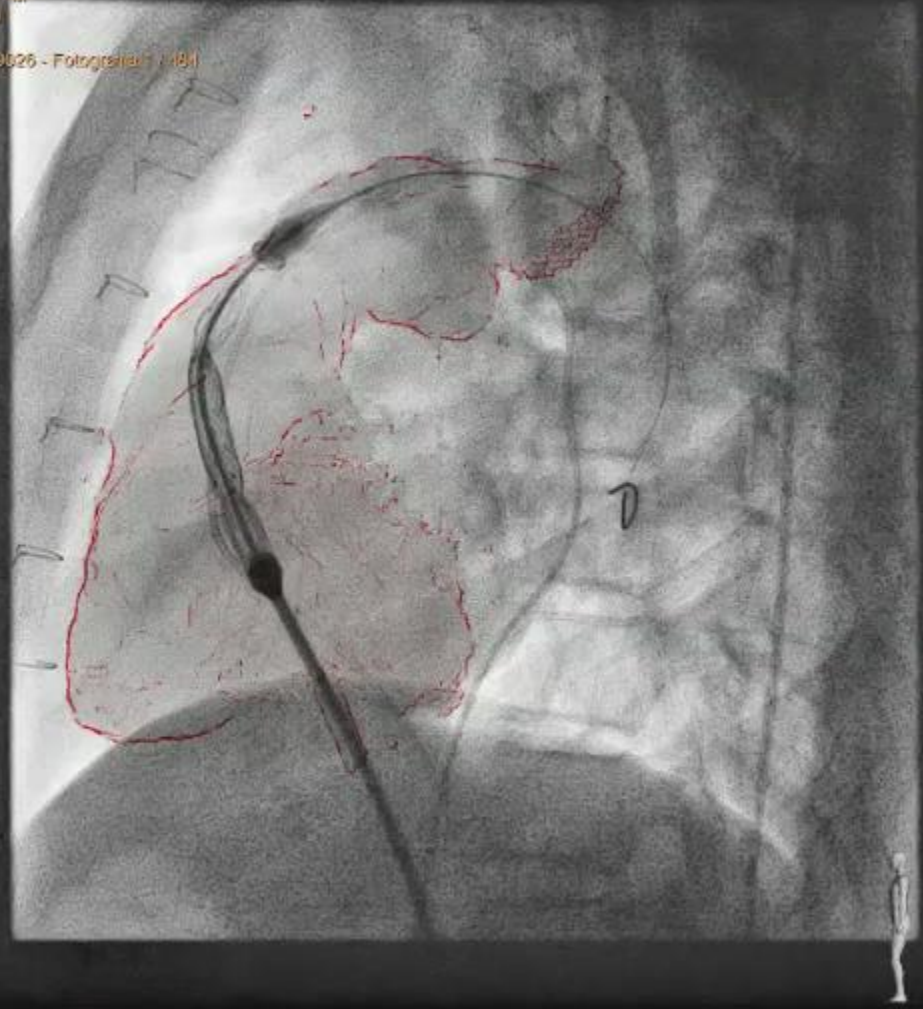
MPA sizing: 24-30 mm

Selected valve to implant 30 mm diameter/30 mm long



214994091  
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2018-09-29  
8:42  
Secuencia 9026 - Fotografía 1 / 481

- KV - mAs  
Zoom 100%

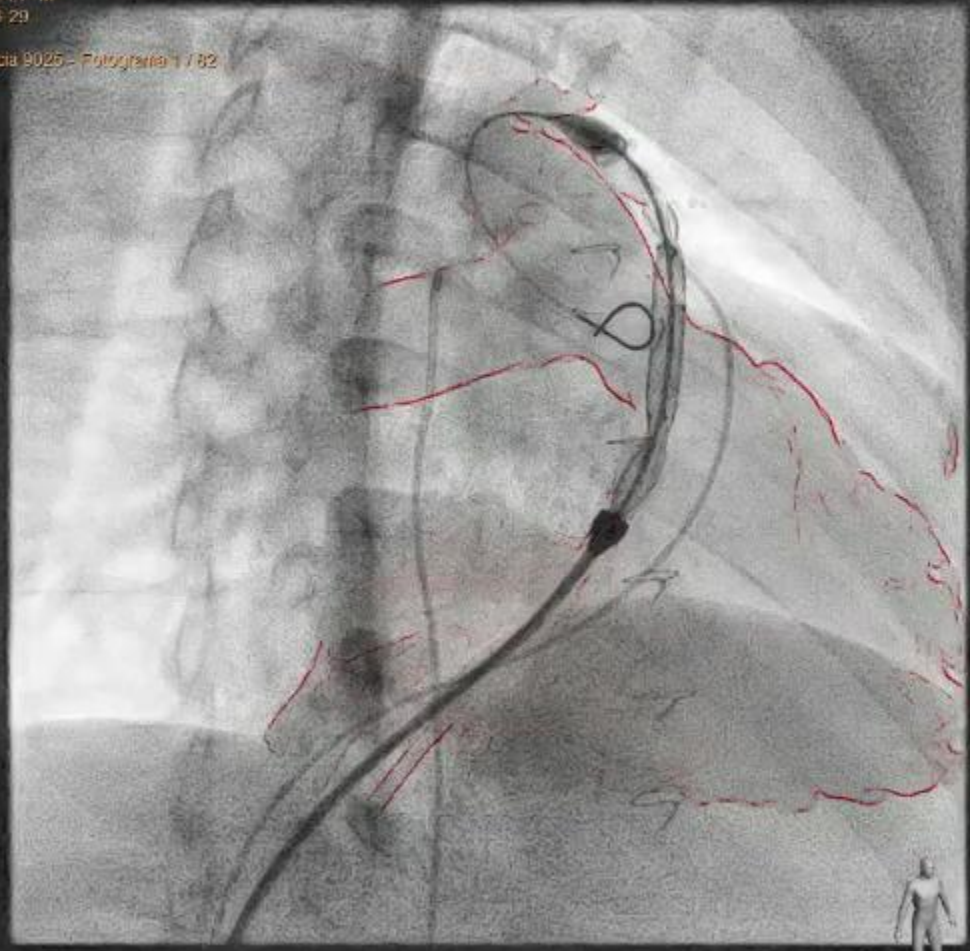


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Z12008911-1  
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2016-03-29  
8:42  
Secuencia 9025 - Patología 1 / 82

kV, mAs  
Zoom 100%

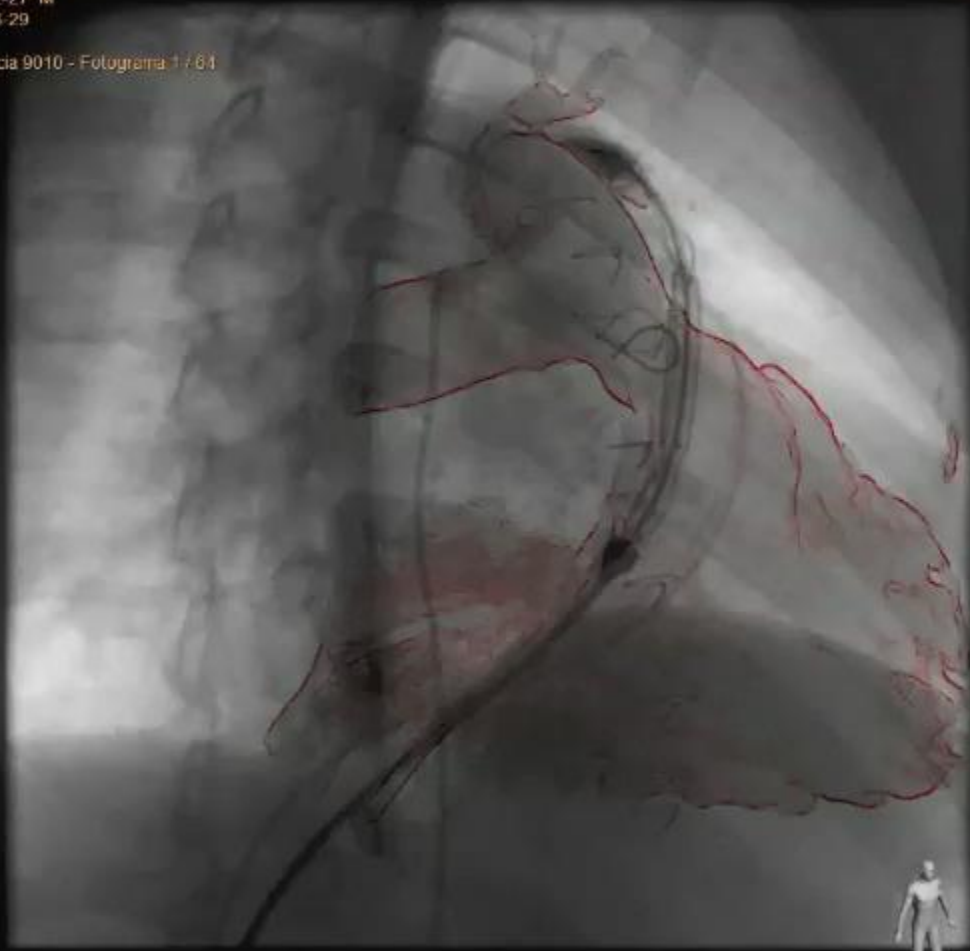


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2016-03-29  
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Secuencia 9010 - Fotograma 1764

- kV, - mAs  
Zoom 100%

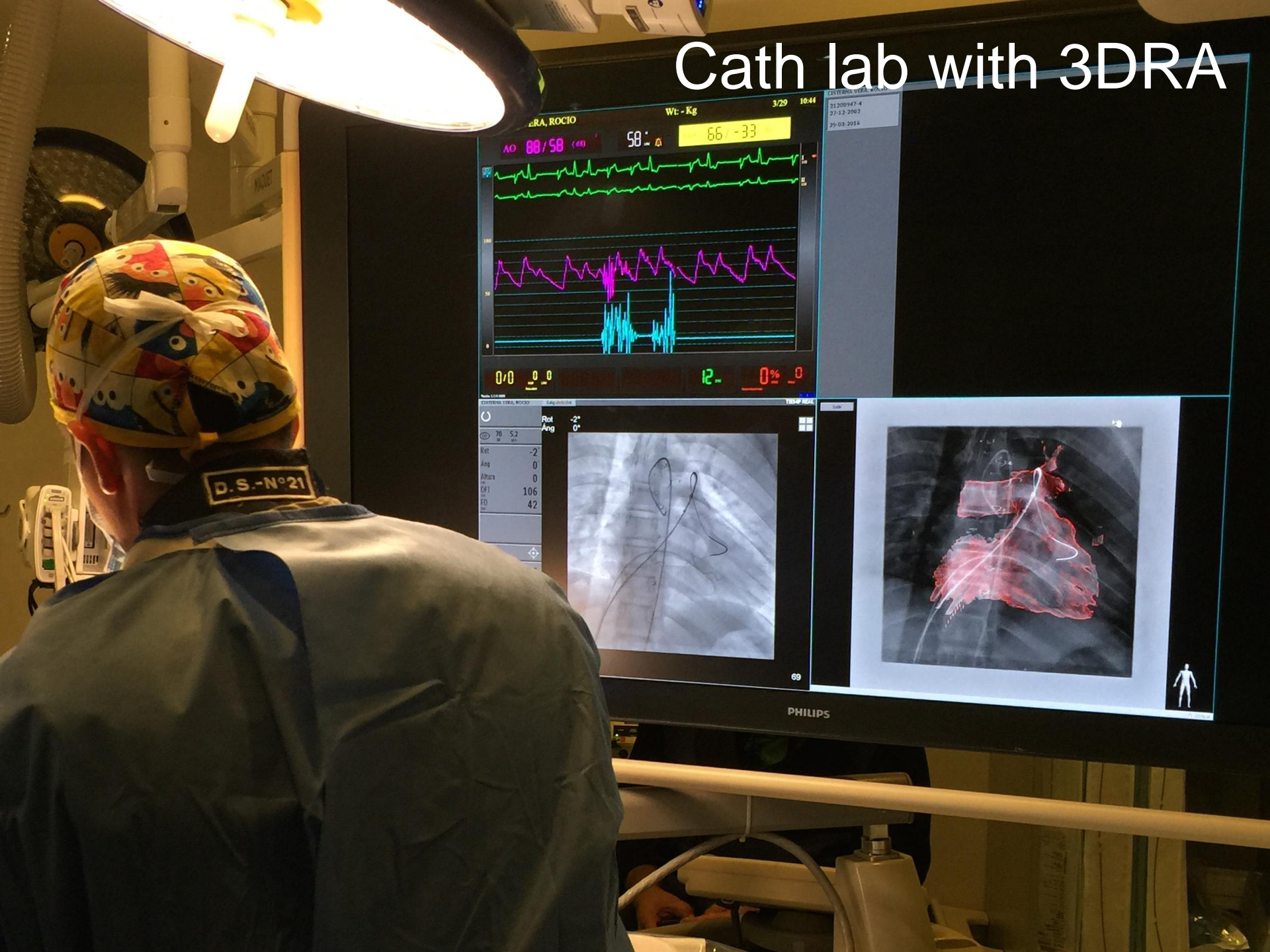


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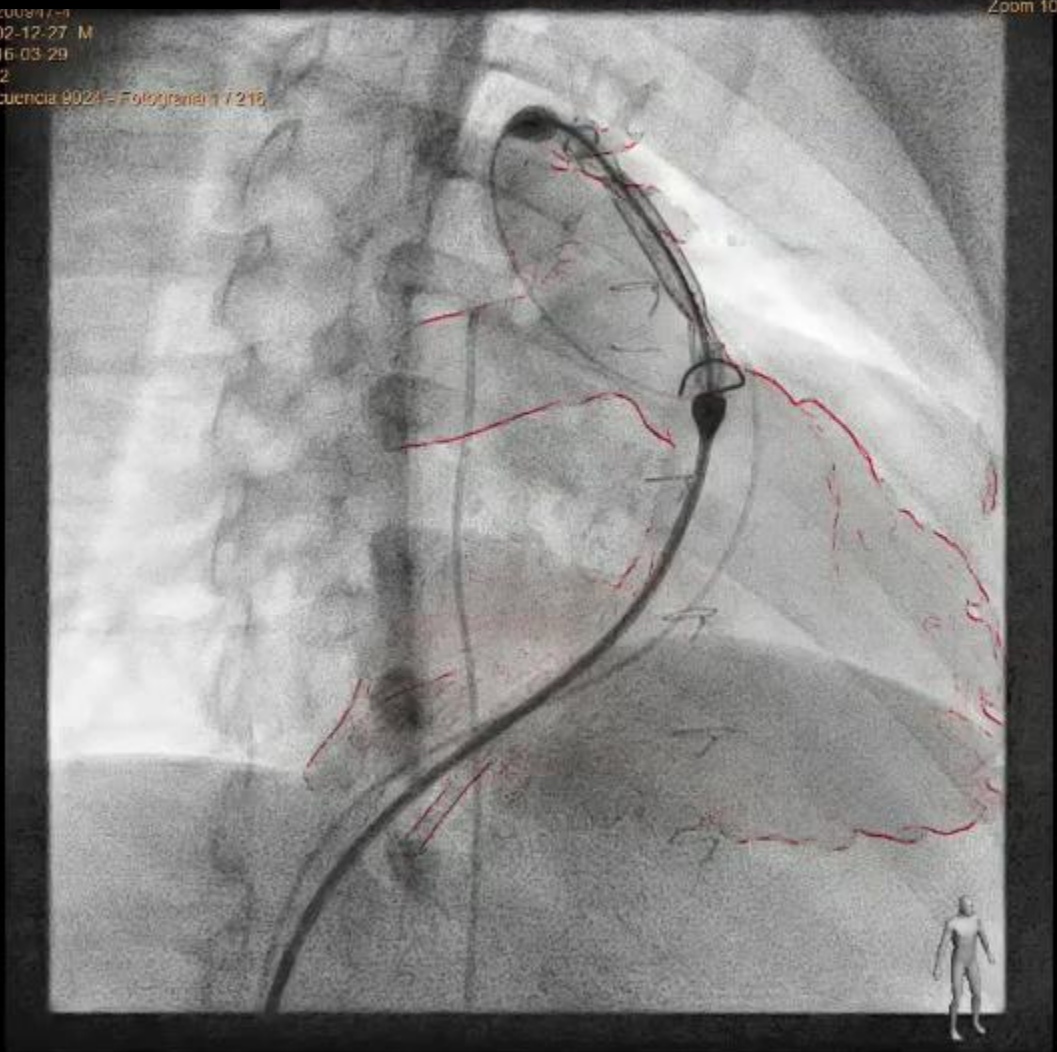


# Cath lab with 3DRA



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2016-03-29  
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Secuencia 9024 - Fotografía 1 / 216

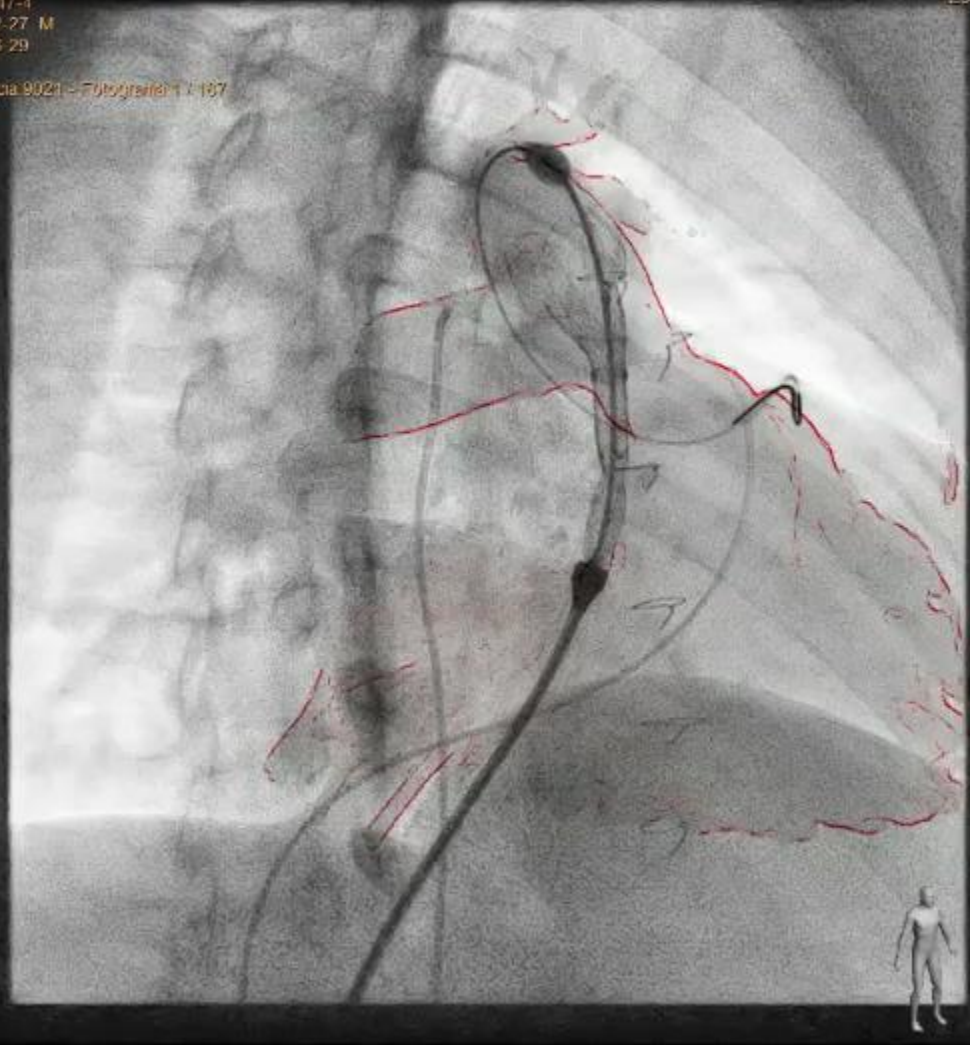
KV: mAs  
Zoom 100%



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21200891-9  
2002-12-27 M  
2016-03-29  
8:42  
Secuencia 9021 - Fotografía 1 / 167

kV, mAs  
Zoom 100%

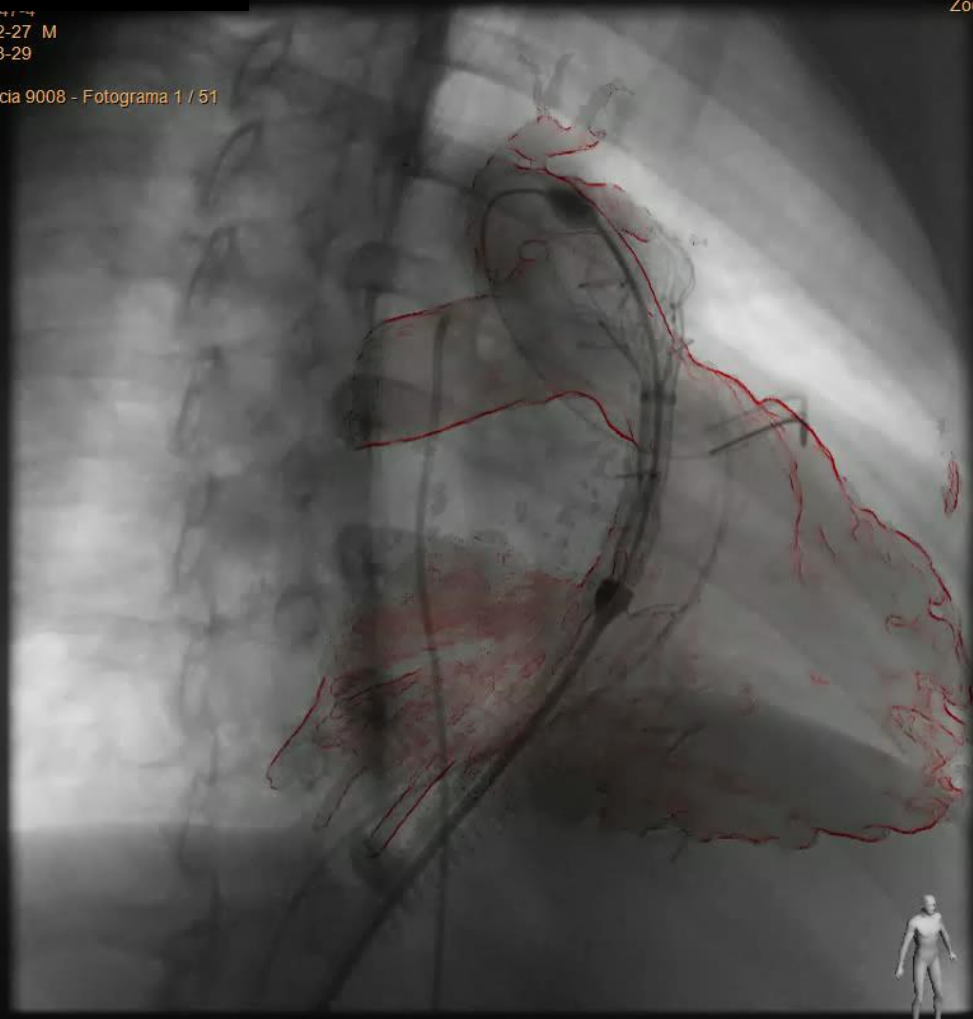


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2016-03-29  
8:42  
Secuencia 9008 - Fotograma 1 / 51

- kV, - mAs  
Zoom 100%

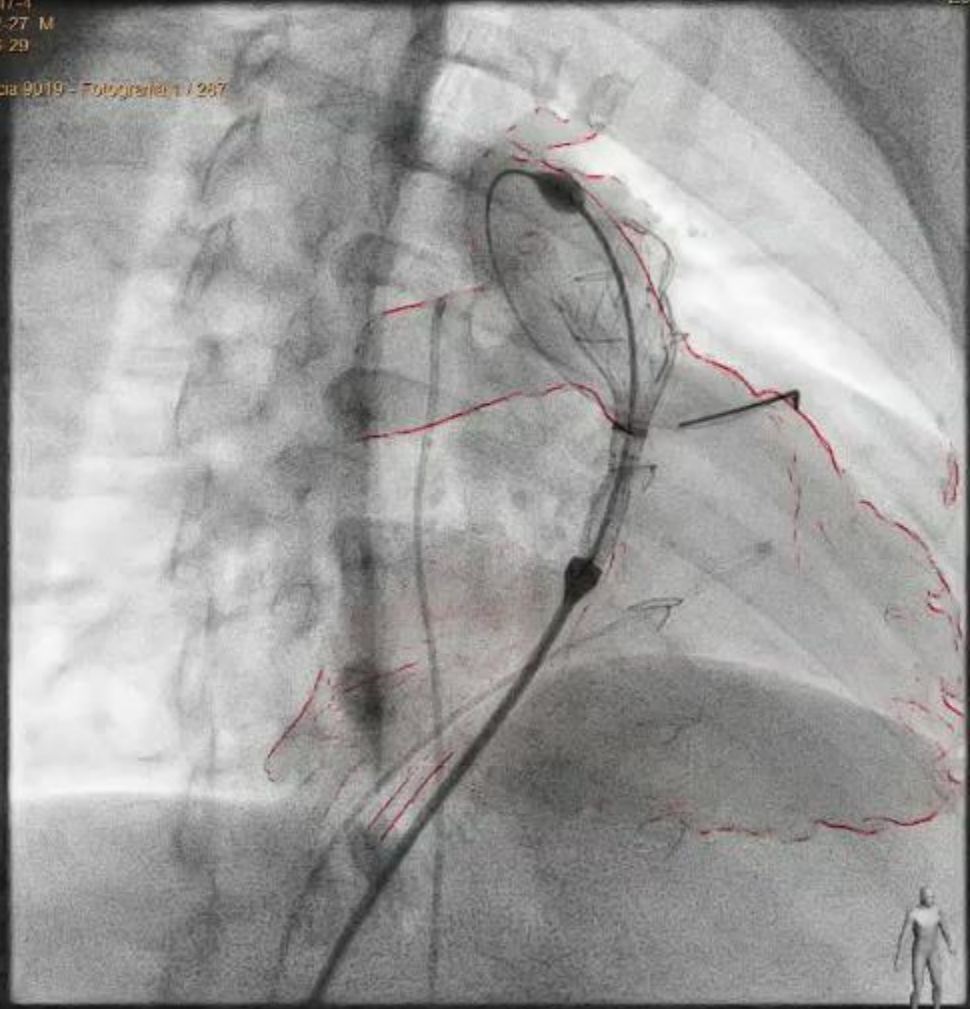


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Z1200811-1  
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2016-03-29  
8:42  
Secuencia 9019 - Fotografía 1 / 267

-KV, -mAs  
Zoom 100%

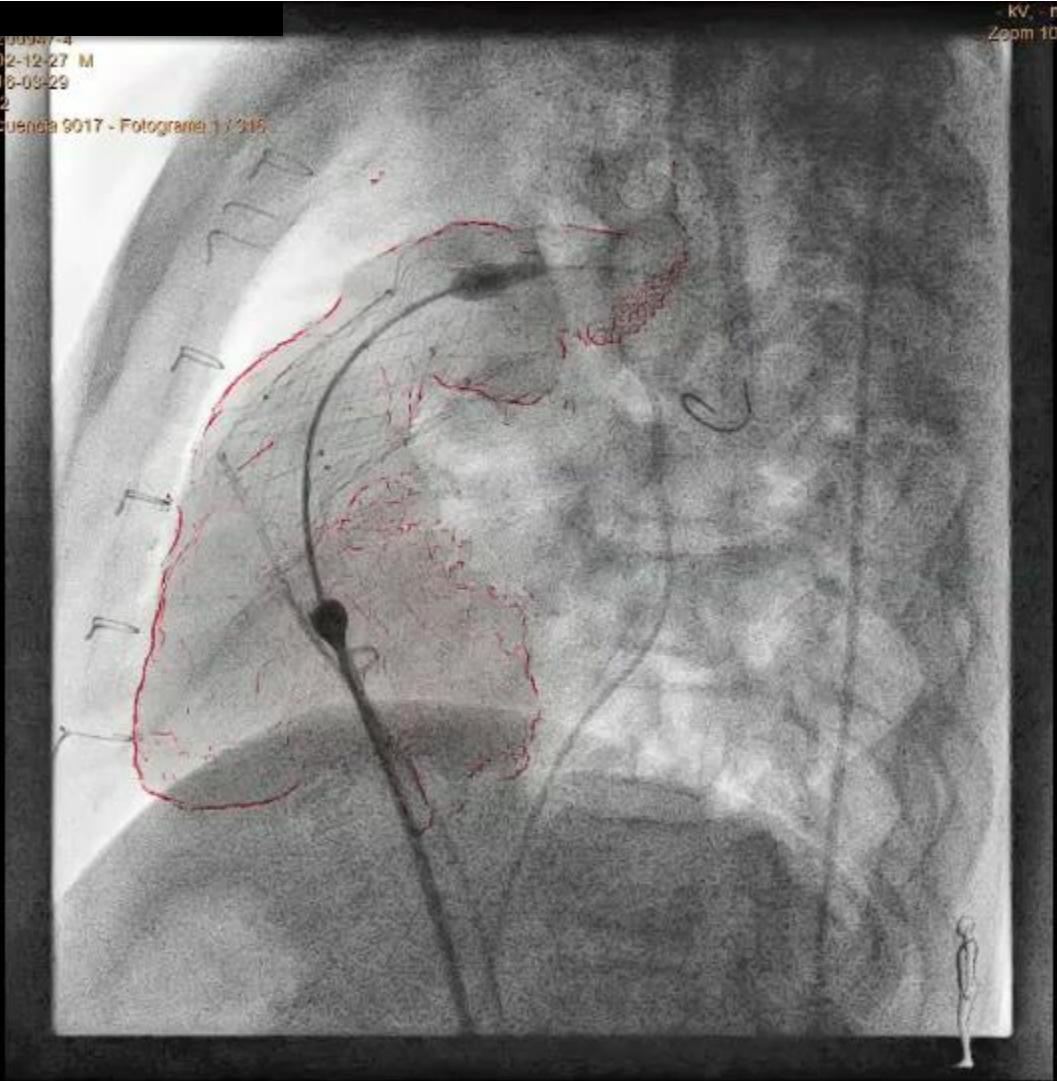


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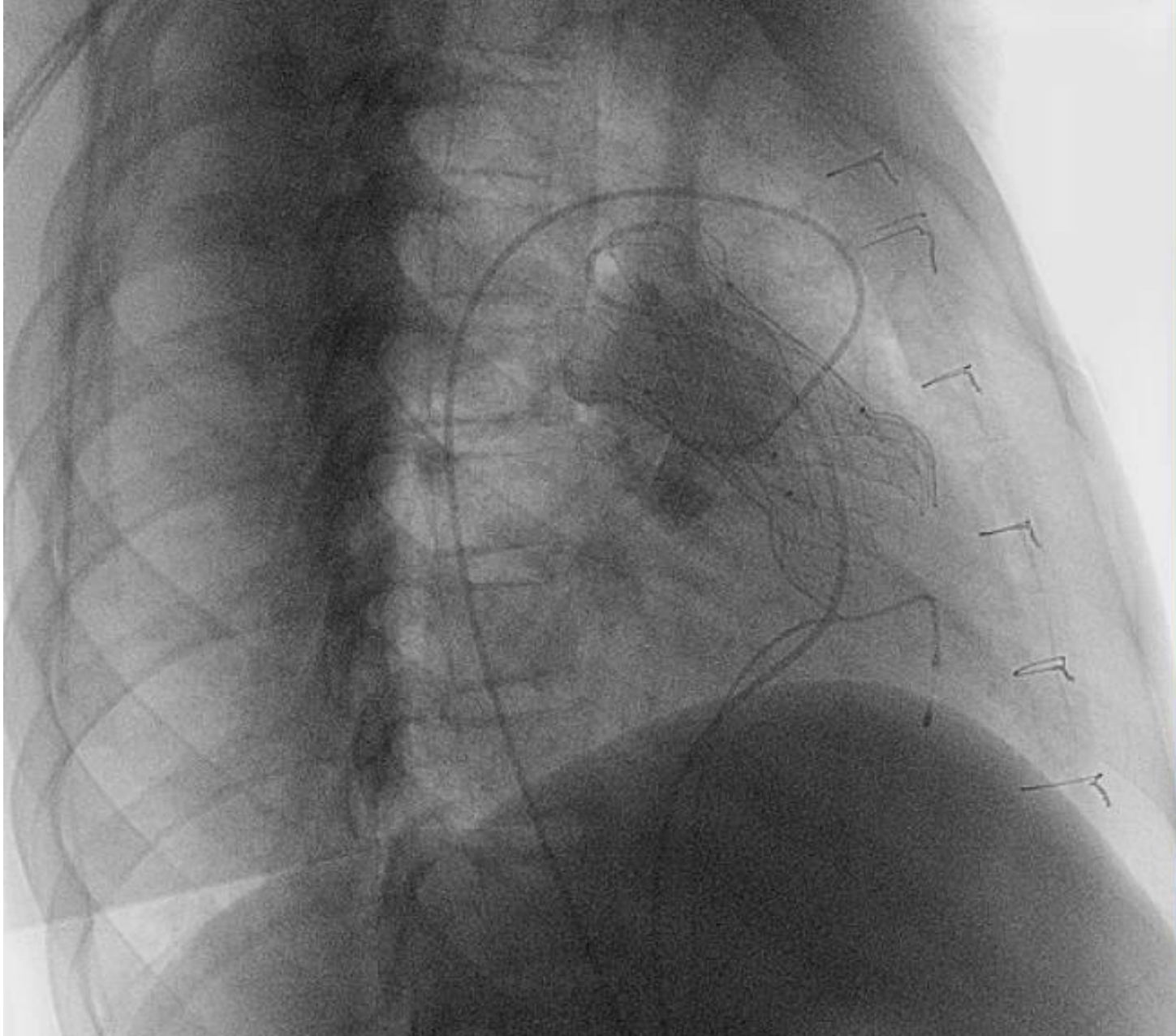
212000474  
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2018-08-29  
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Secuencia 9017 - Fotografía 1 / 115

- kV, - mAs  
Zoom 100%



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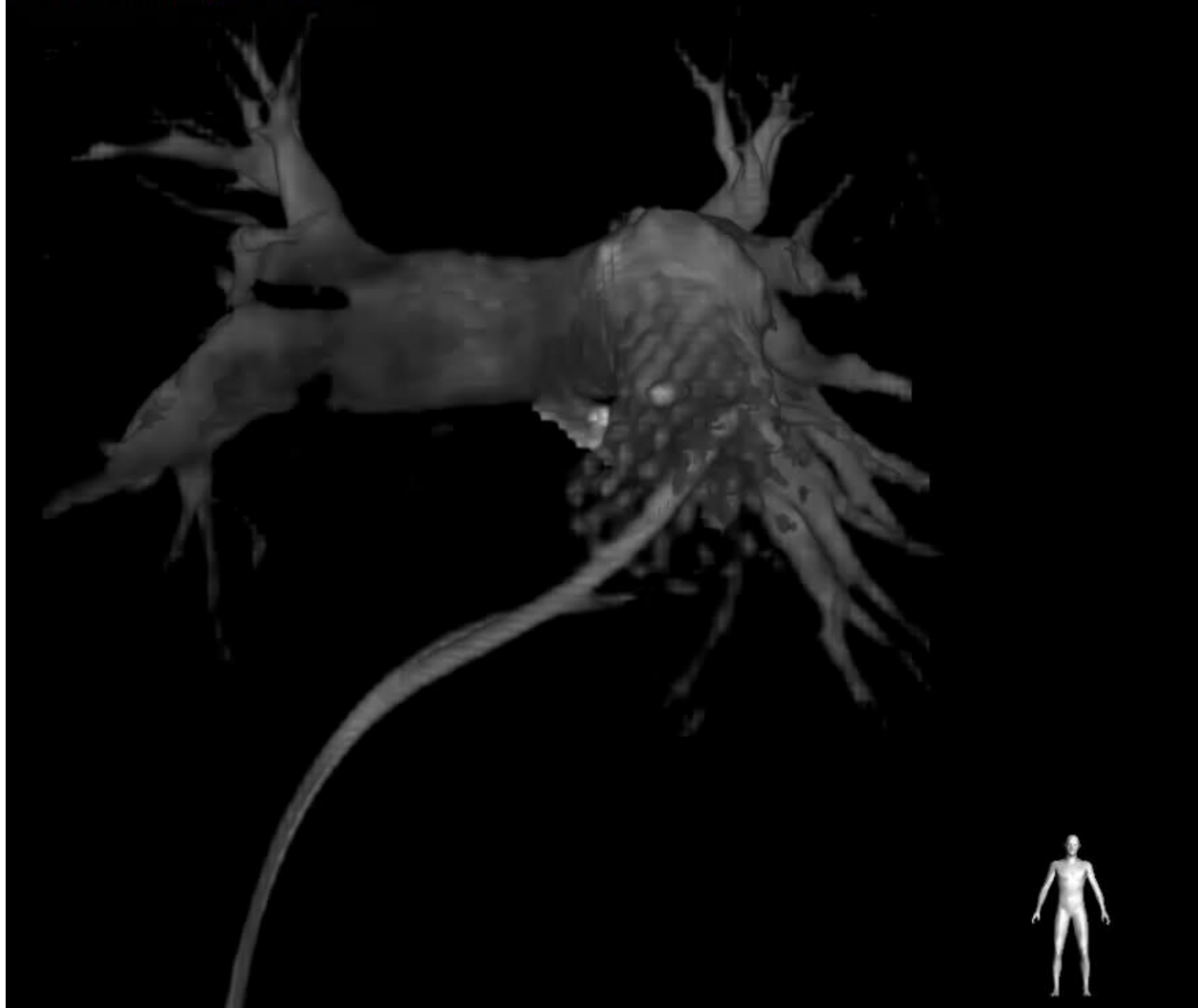
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21200947-4  
2002-12-27 M  
2016-03-29  
8:42

Zoom 100%

Secuencia 9031 - Fotograma 1 / 293





# Radiation doses – Venus p-valve cases.

PPVI with Venus p-valve® - initial experience.

Santiago Chile. March 28th, 2016.

	<b>case 1</b>	<b>case 2</b>	<b>case 3</b>
	Siemens	Siemens	Philips
	biplane	biplane	3DRA
<b>fluoro time</b>	29.4 min	27.4 min	23.7 min
<b>PDA</b>	20686 uGy*m2	22593 uGy*m2	5317 uGy*m2
<b>KA</b>	1793 mGy	2233 mGy	218 mGy
<b>weight</b>	58.6 kg	53 kg	62 kg
<b>height</b>	157 cm	151 cm	162 cm
<b>contrast</b>	210 ml	255 ml	150 ml



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## RCV

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