

# Complex TAVI Case



Hospital Alemão Oswaldo Cruz  
São Paulo, Brazil

# Complex TAVI Case



## Operators

(Interventional Cardiology):

Eberhard Grube, MD

Marco Magalhães, MD

## Operators

(Cardiovascular Surgery):

Januário M. Souza, MD

Rafael Schneidewind, MD

# Complex TAVI Case

## Presentation:

Heart failure (NYHA–III)

Presyncope

## Aortic Stenosis: (02/2012)

AVA: 0.57cm<sup>2</sup>

Gradient (mean): 56mm Hg

LVEF: 65%

PASP: 48 mm Hg

## Risk factors:

Hypertension

Dyslipidemia

Diabetes

Chronic renal failure

(GFR=55.9 ml/min)

## Past Medical History:

### Coronary:

CABG in 1997 triple vessel: LIMA–LAD/ SVG– OM<sup>1</sup>/ SVG–OM<sup>2</sup>/SVG–Pda

### Cerebro Vascular:

Right endarterectomy in 1997

### Peripheral Vascular:

Leriche's syndrome: Aorto– Biliac Bypass and left renal artery Bypass in 1996

# Complex TAVI Case

## Clinical Data

Height: 1.64

EuroScore II: 25.93%

Weight: 82 Kg

BMI: 31.2

### Medical therapy:

Aspirin	100mg
Atorvastatin	10mg
Lasix	40mg
Amlodipin	10mg
Losartan	100mg
Aldactone	25mg

# Complex TAVI Case

## TEE Echo Data

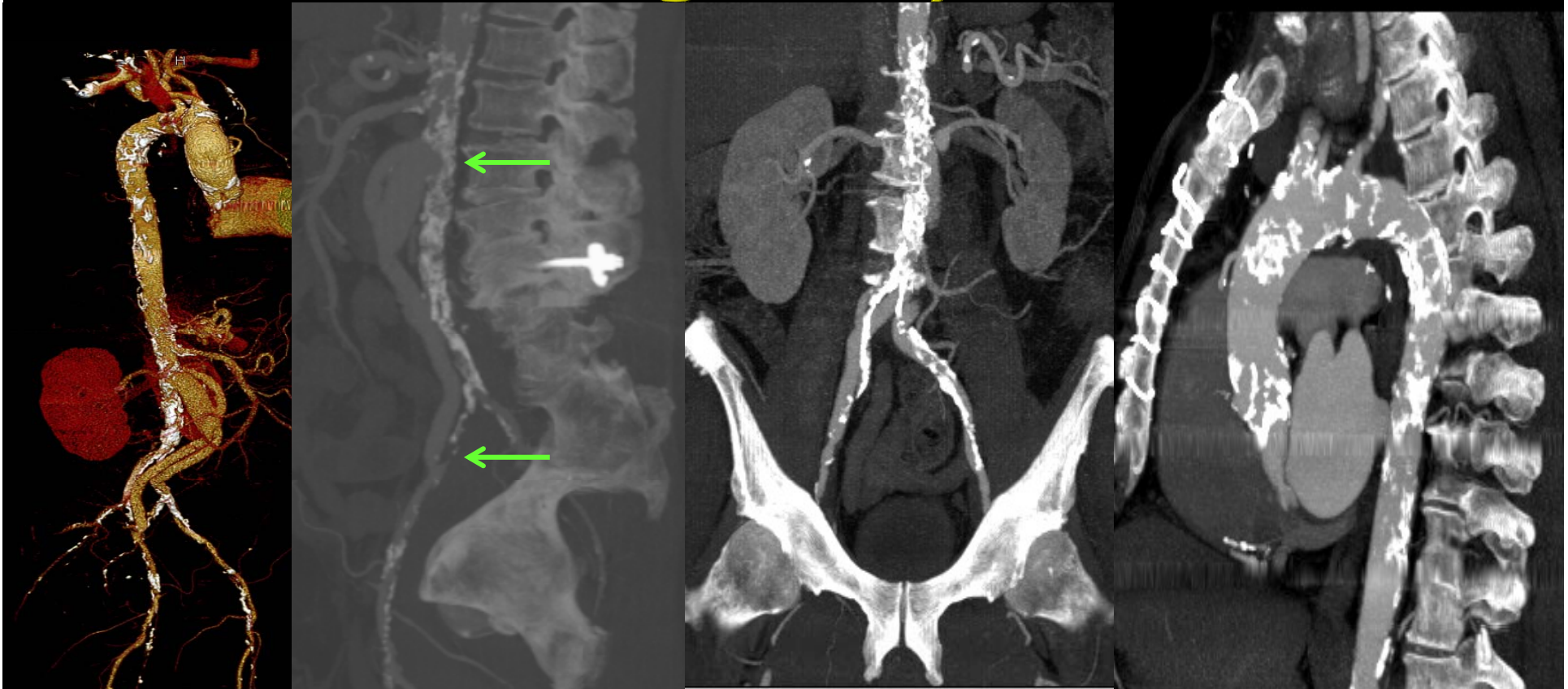
29 HOSP OSWALDO CRUZ S7-2omni/Adult  
0:48:08





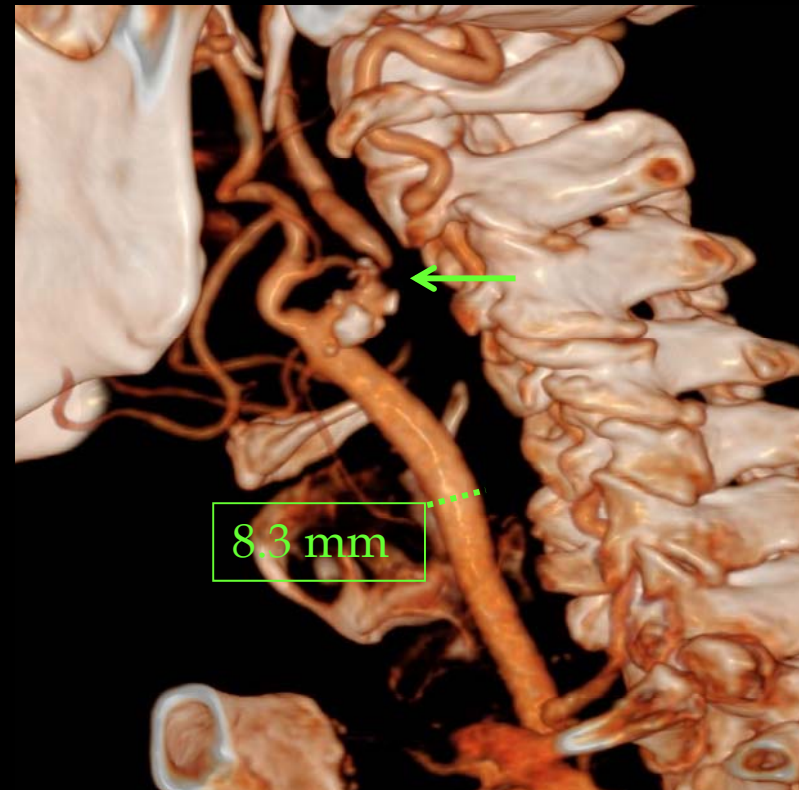
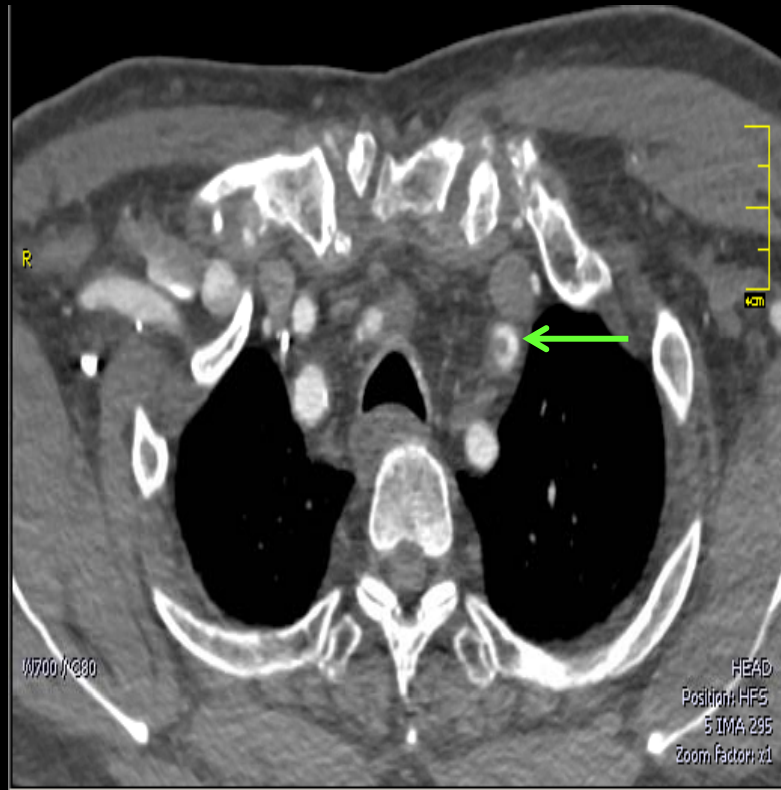
# Complex TAVI Case

## Distal Aortic Run-Off and Aortic Arch Image Analysis



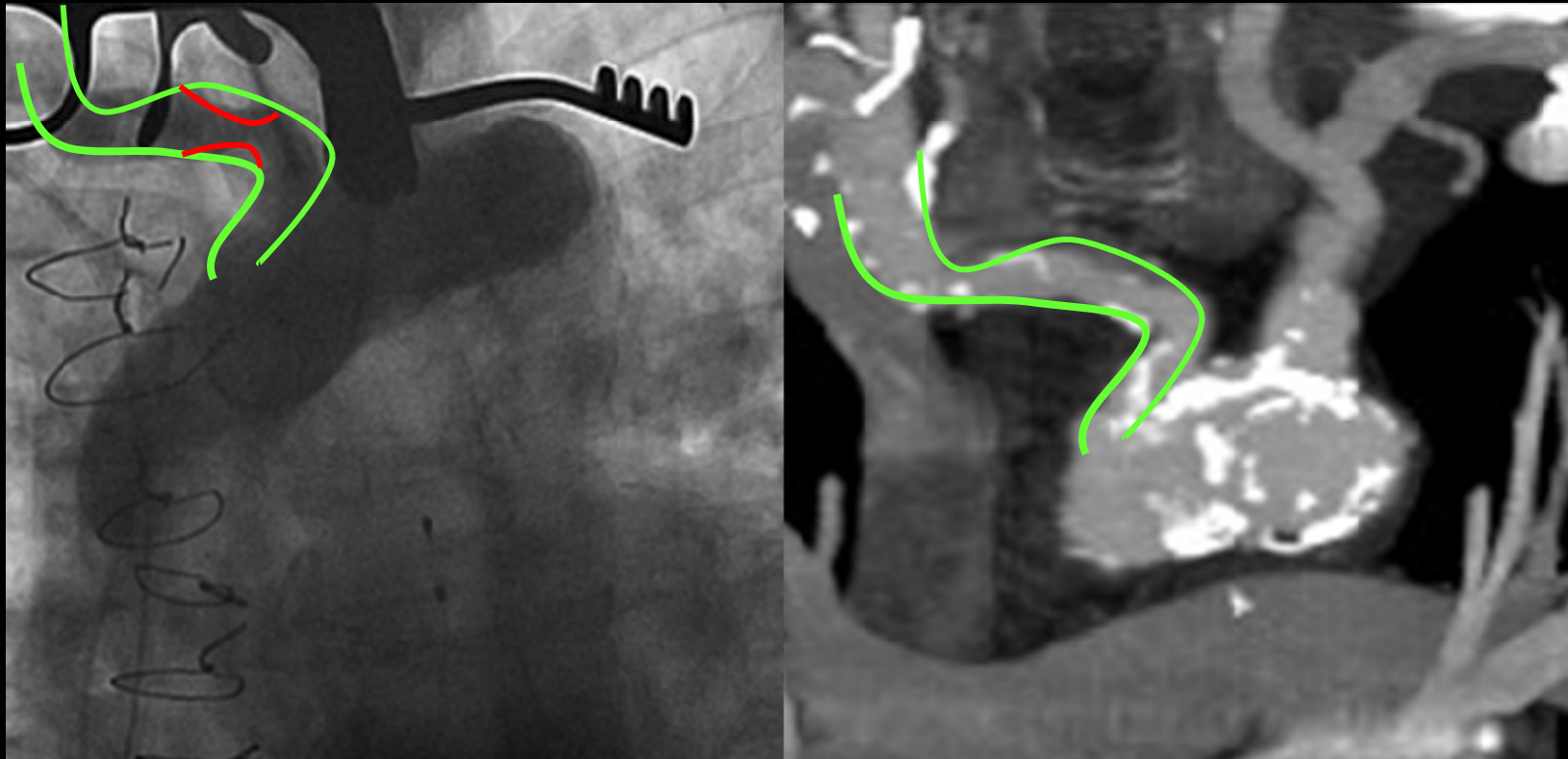
# Complex TAVI Case

## Aortic Arch, carotid and subclavian vessels Image Analysis



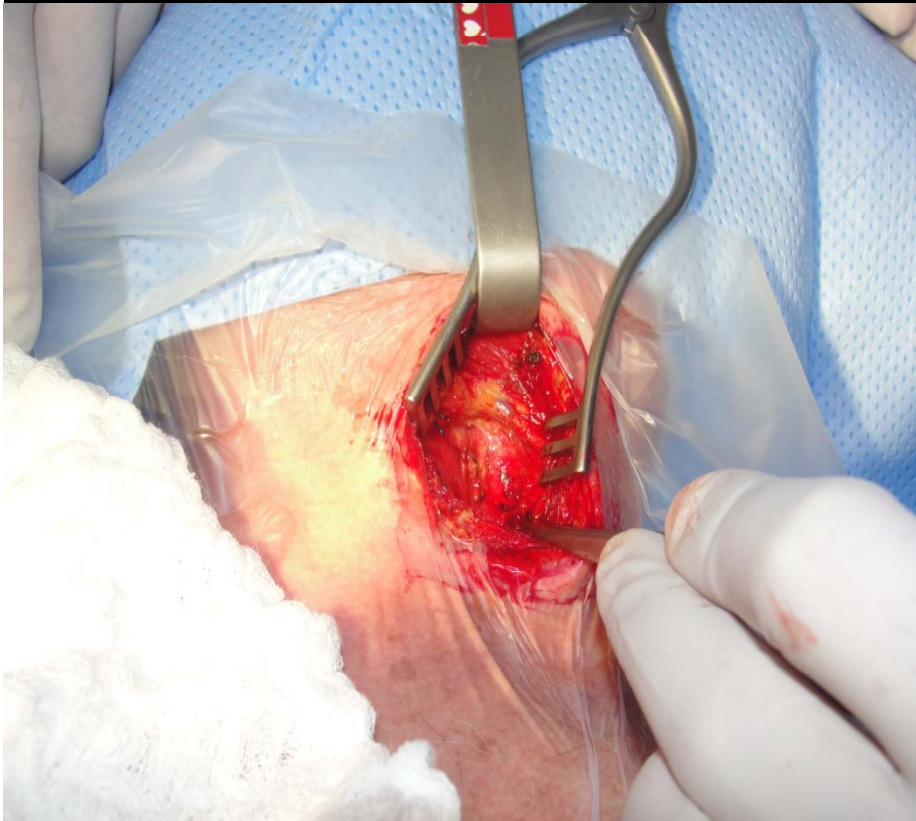
# Complex TAVI Case

## Aortic Arch, carotid and subclavian vessels Image Analysis

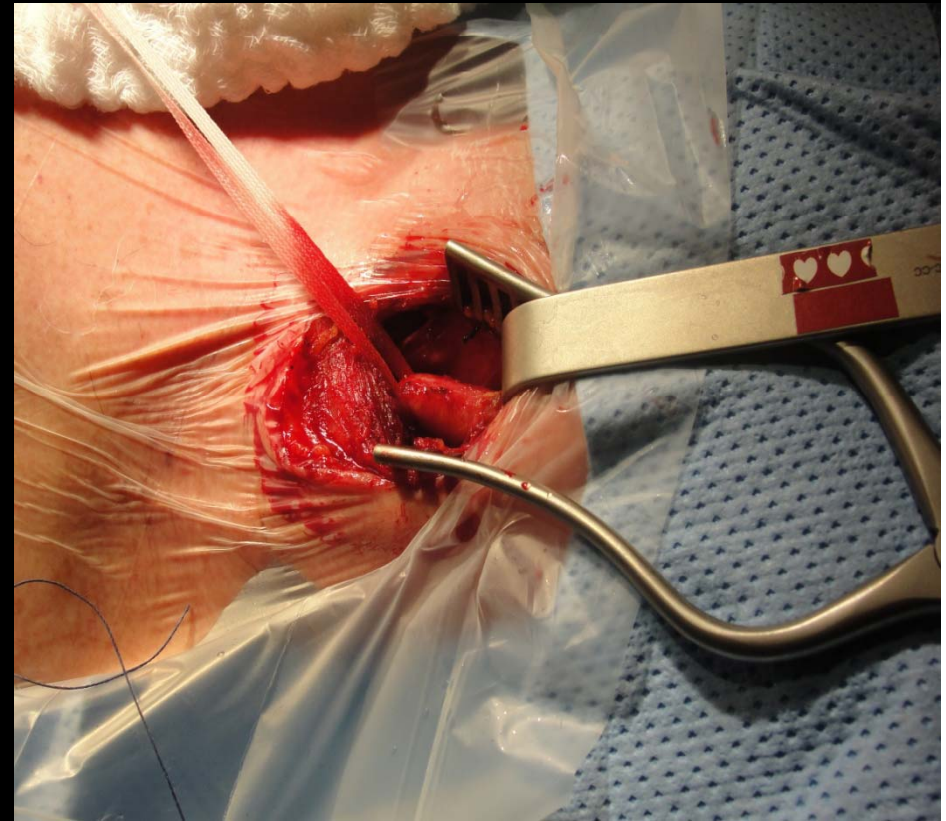




# Complex TAVI Case Access preparation

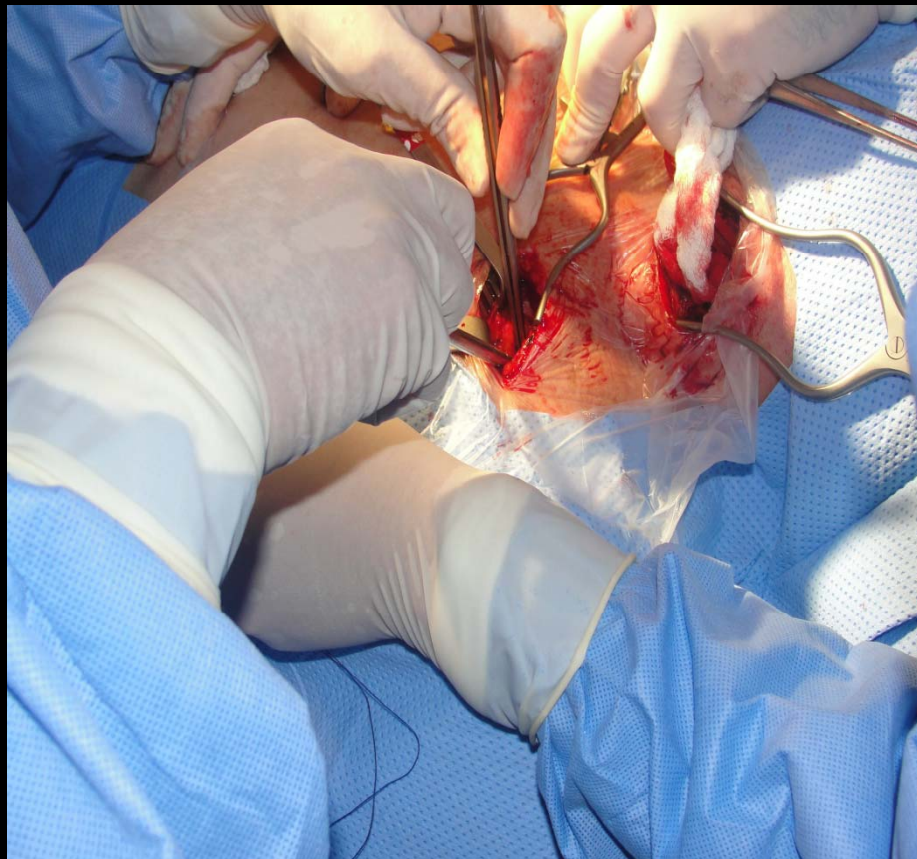


Left Common carotid artery  
dissected

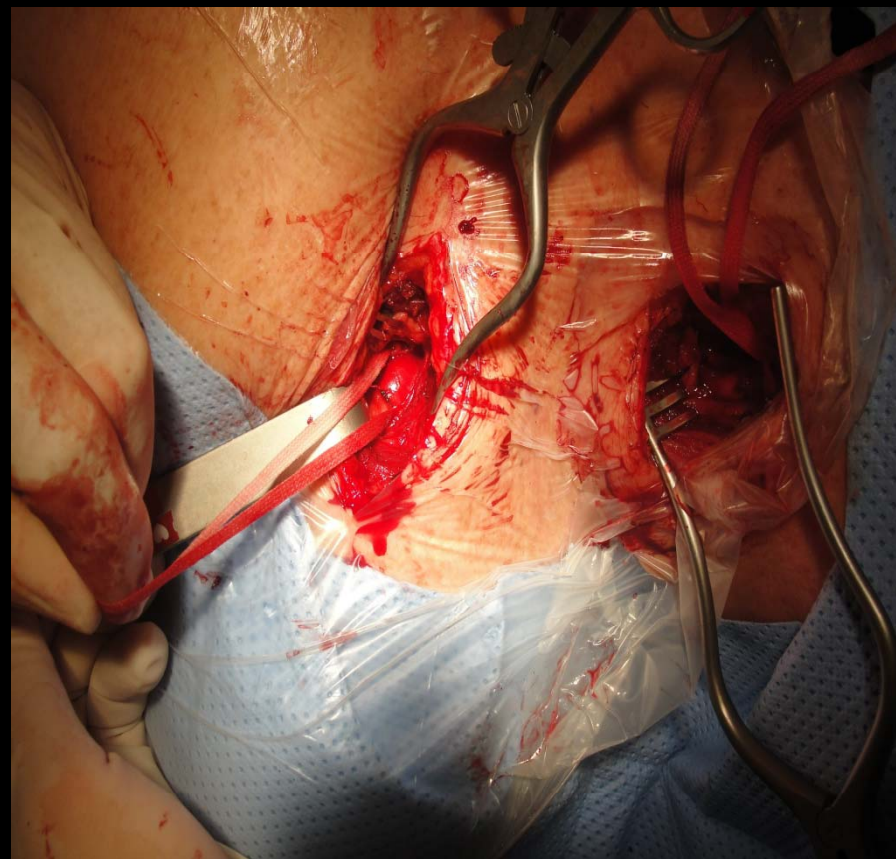


Left Common carotid artery  
exposed

# Complex TAVI Case Access preparation



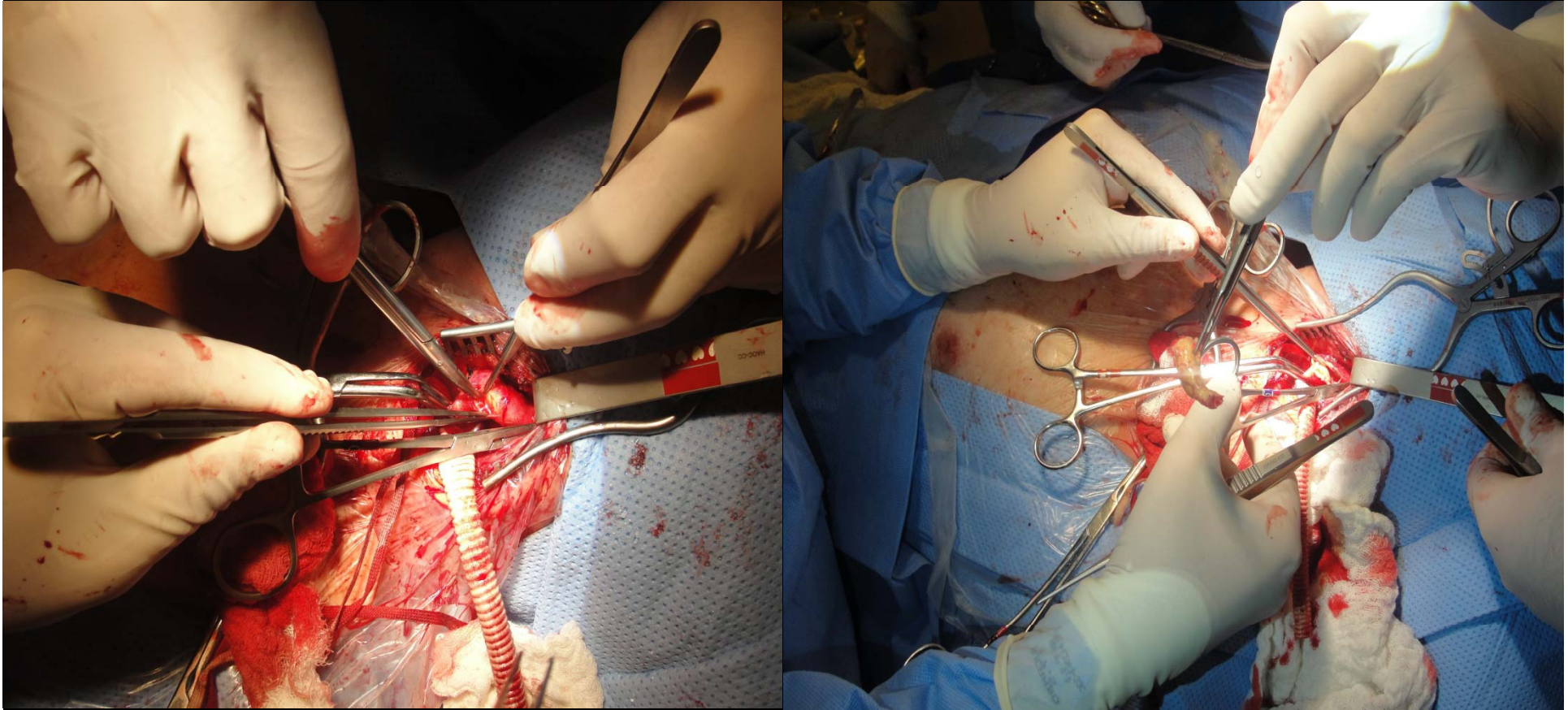
Left Subclavian artery dissected



Left Subclavian artery exposed

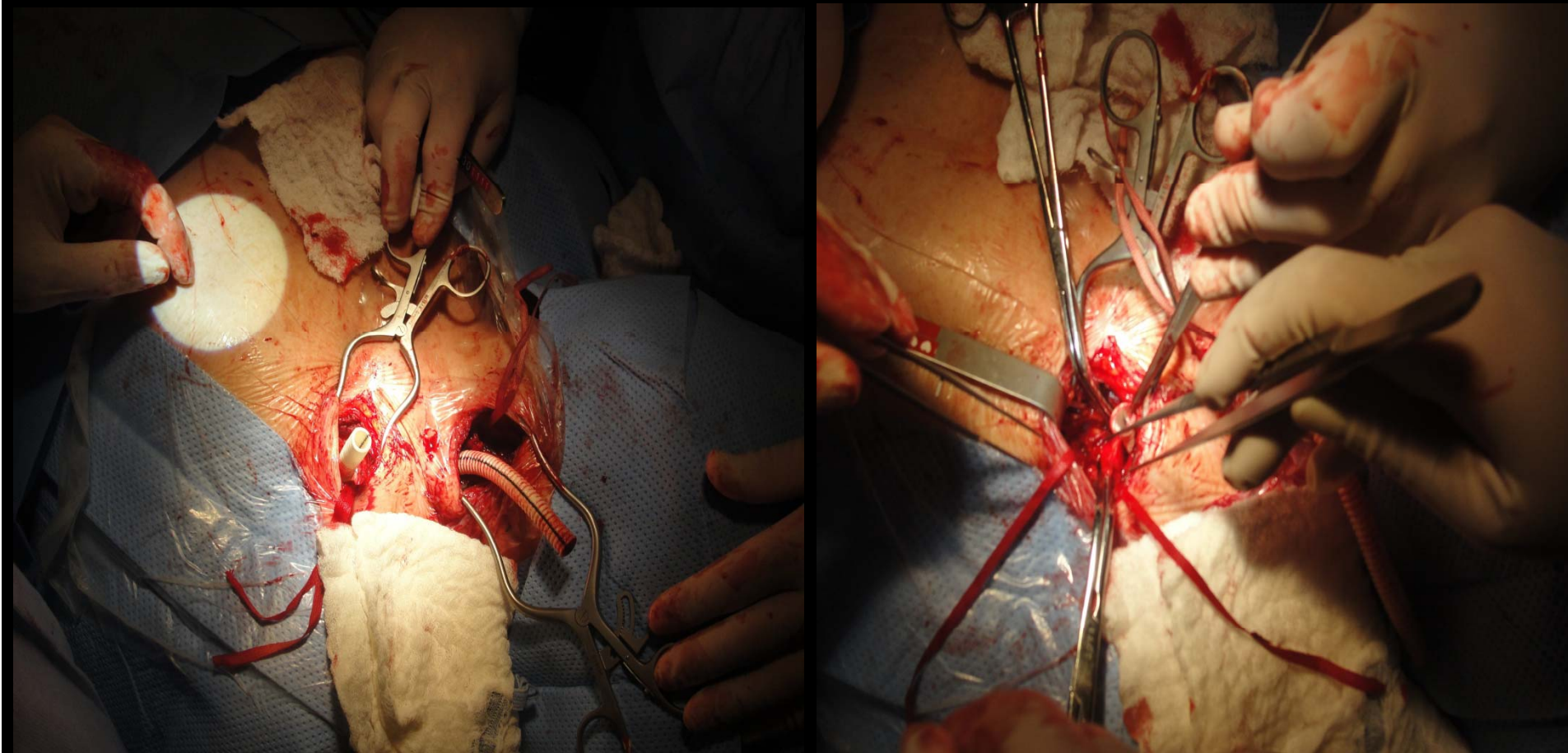


# Complex TAVI Case Access preparation



Left common carotid endarterectomy

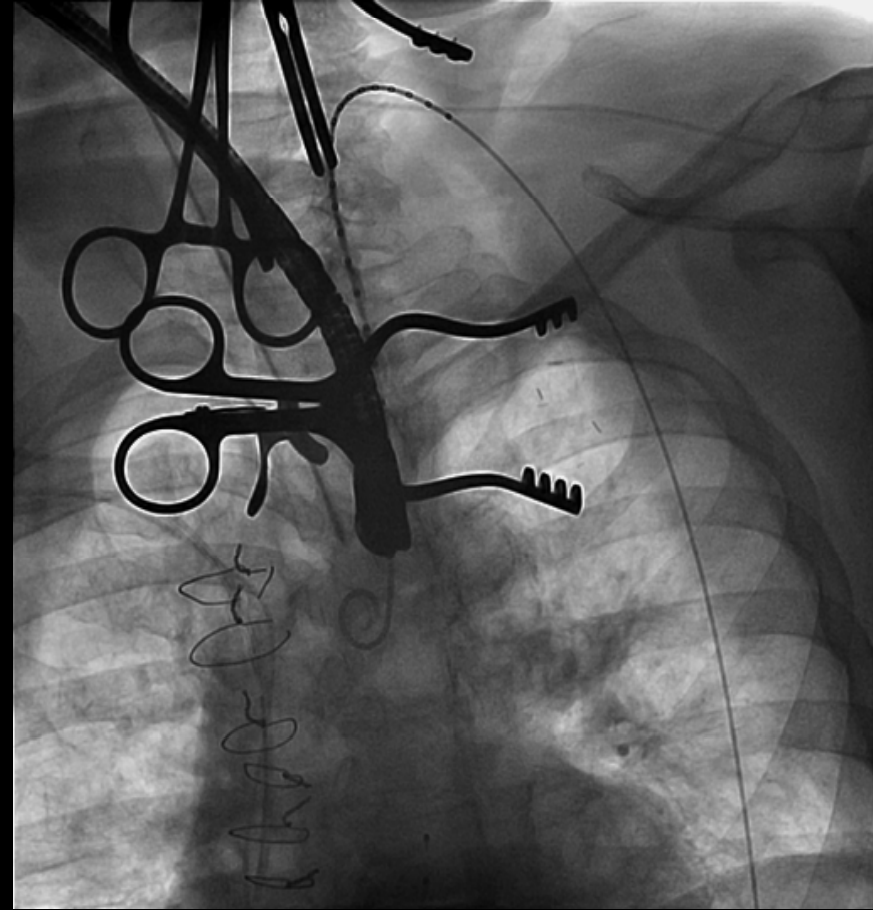
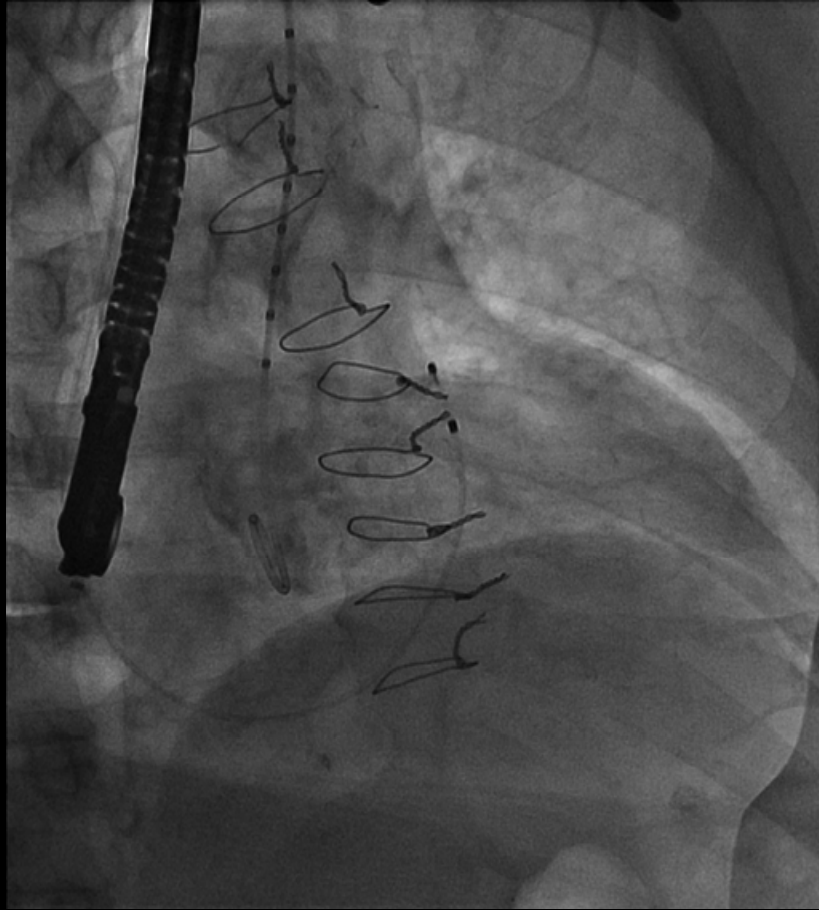
# Complex TAVI Case Access preparation



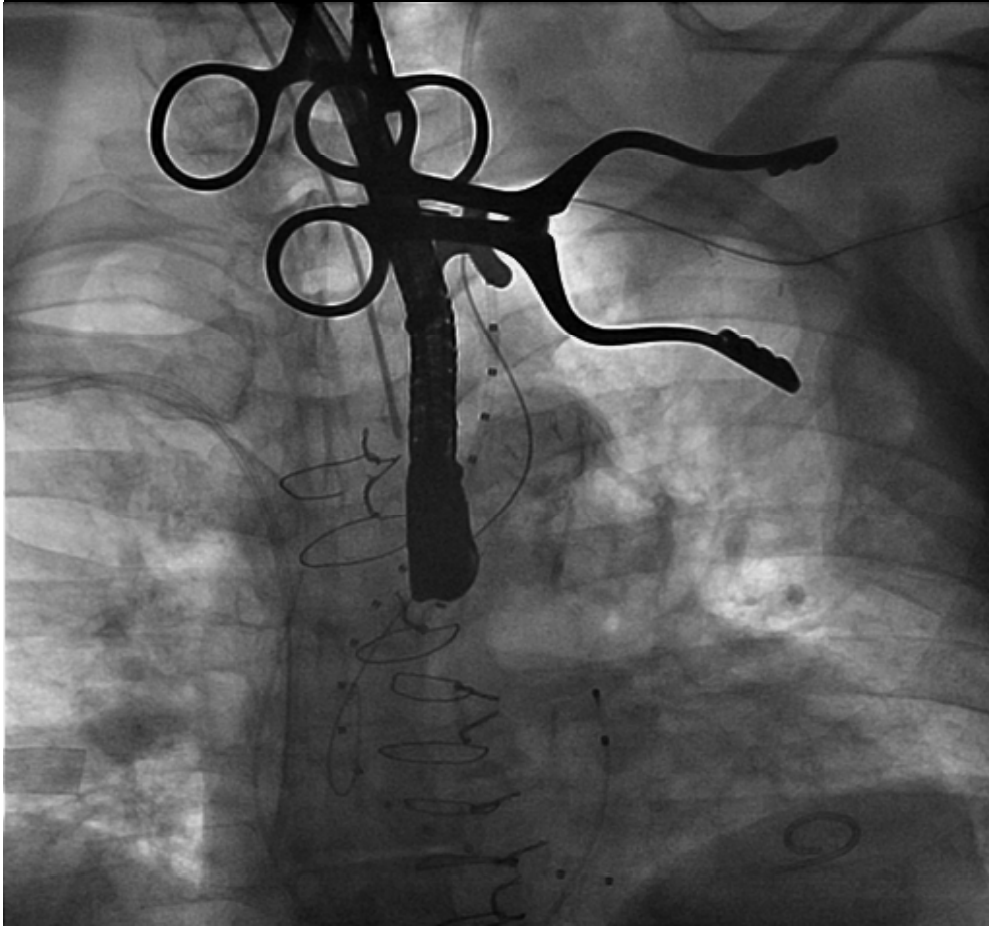
**Tunnel Bypass Graft Left subclavian- Left  
Common carotid  
Carotid clamping time=12 min.**



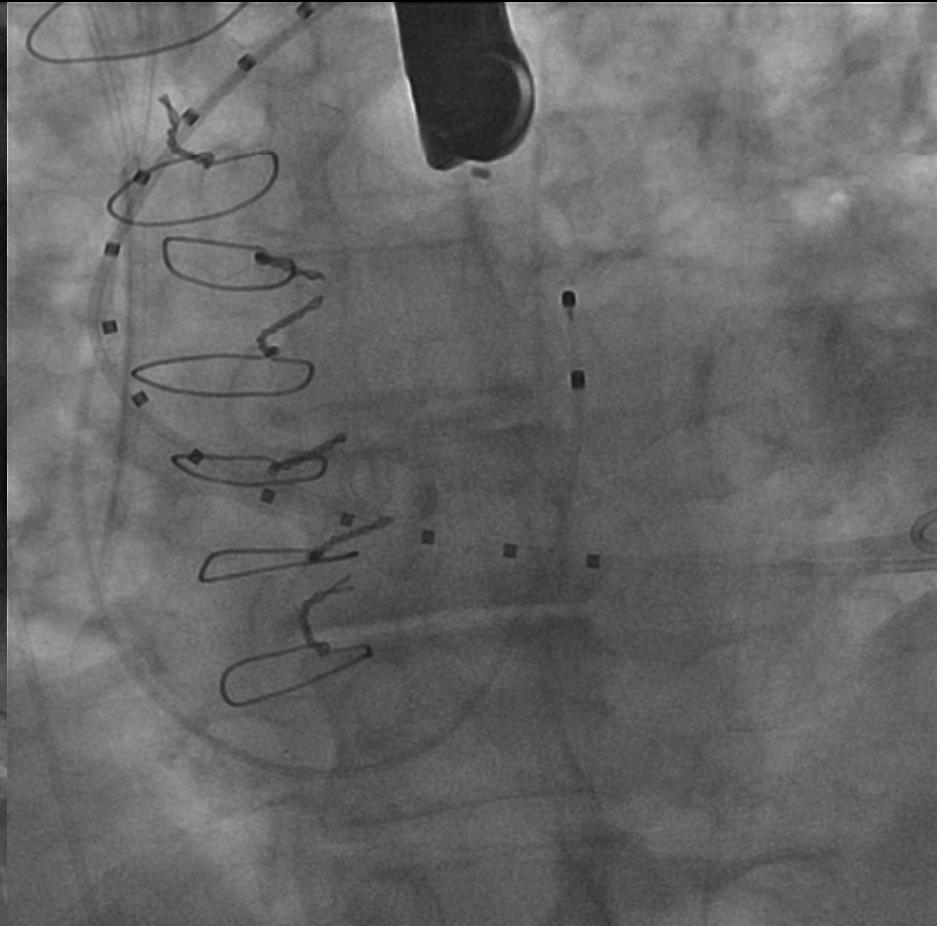
# TAVI Procedure through the left Carotid Artery



# TAVI Procedure through the Left Carotid Artery and Left Subclavian artery

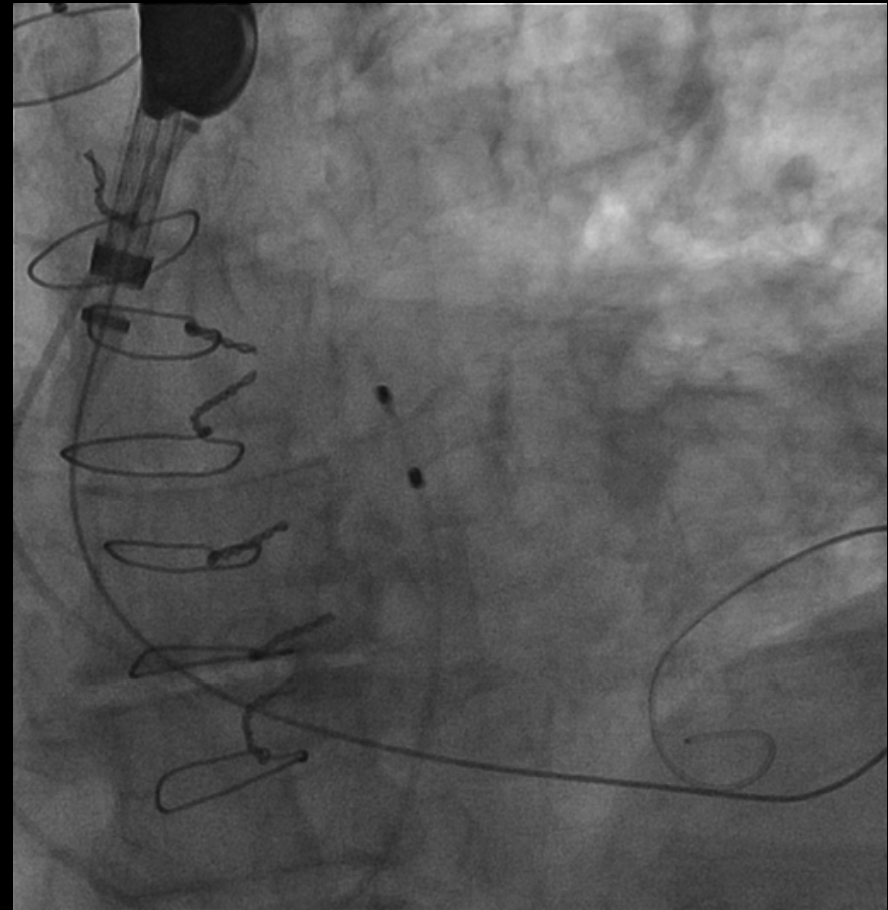
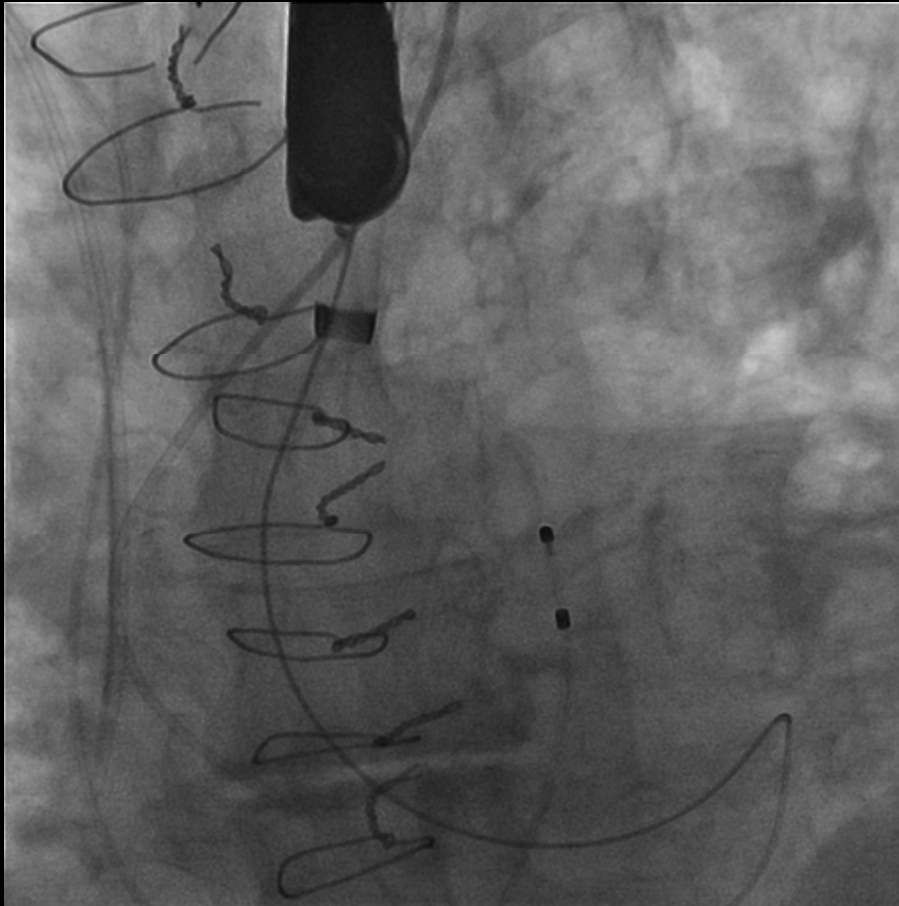


One more challenge...



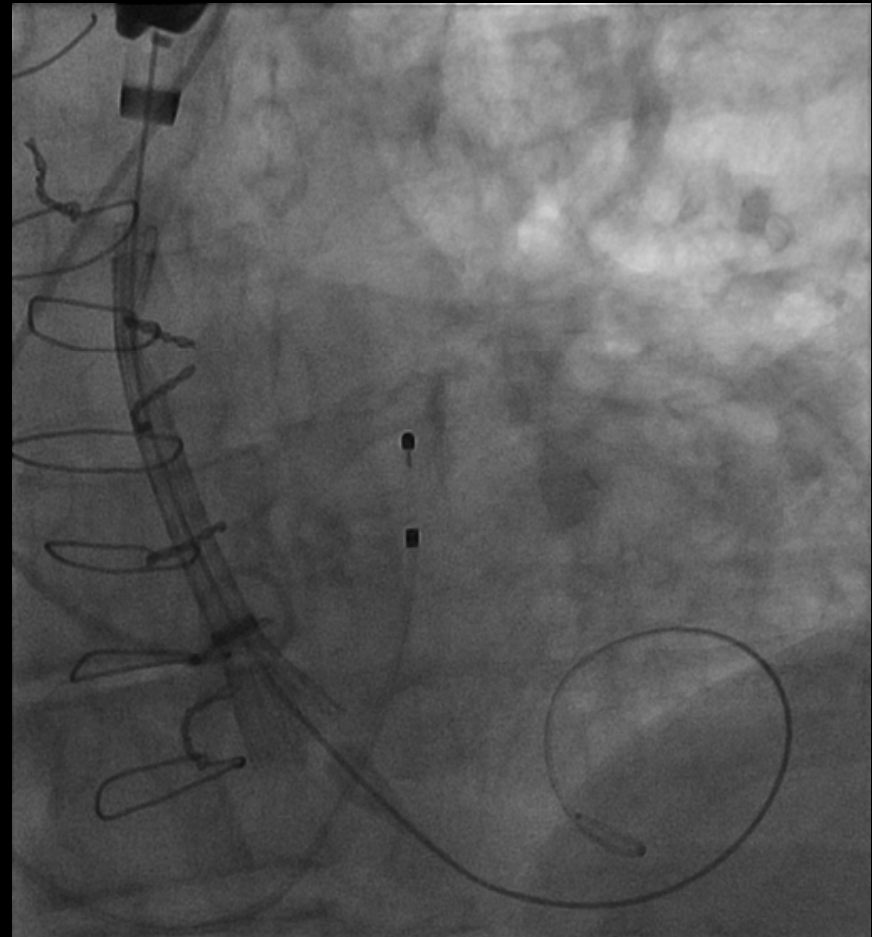
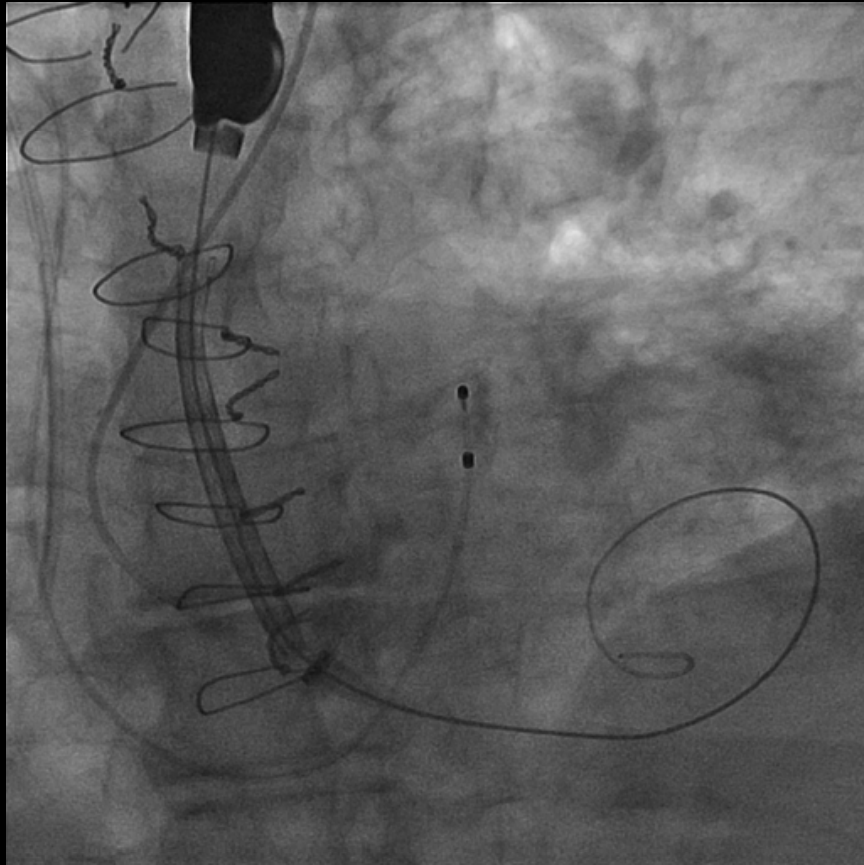
Horizontal Aorta!!!

**18 French sheath in place  
Carotid TAVI...  
A very straight pathway**



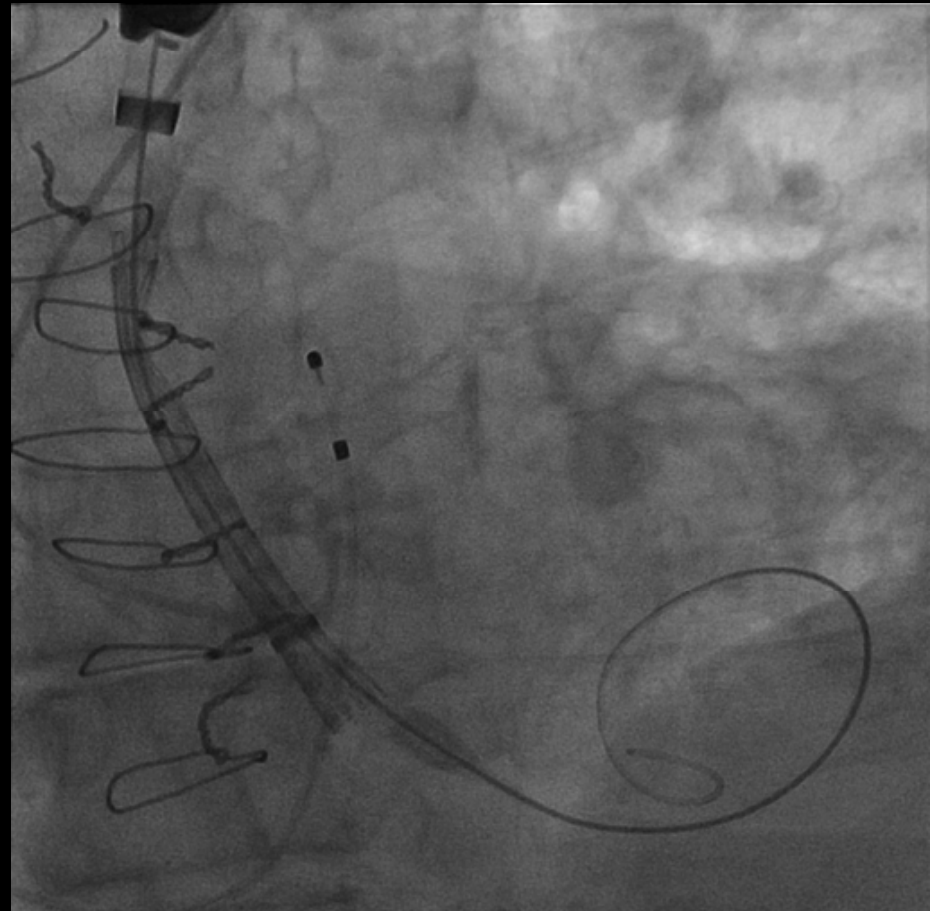
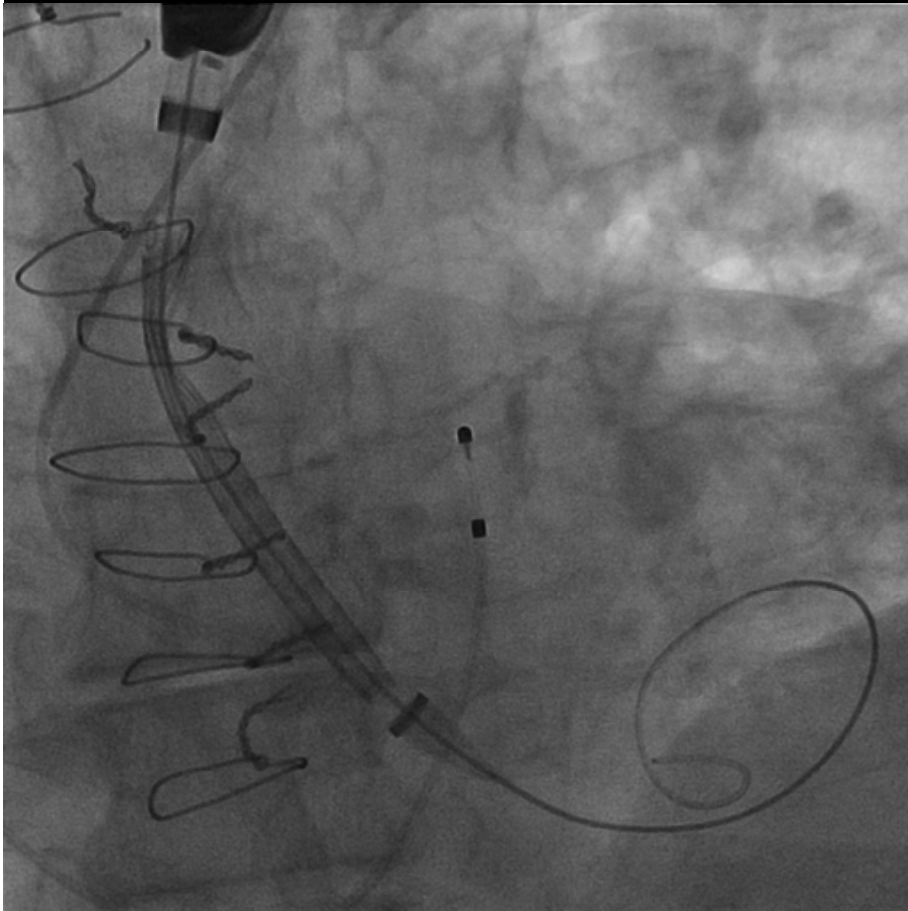


# Direct Navigation/Crossing



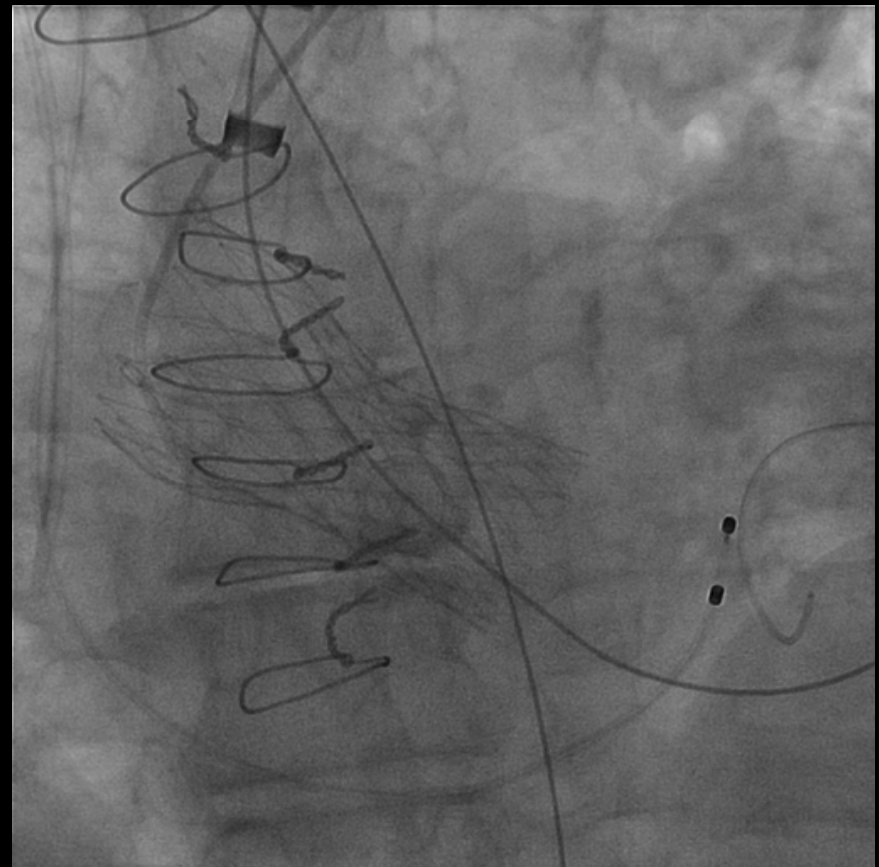
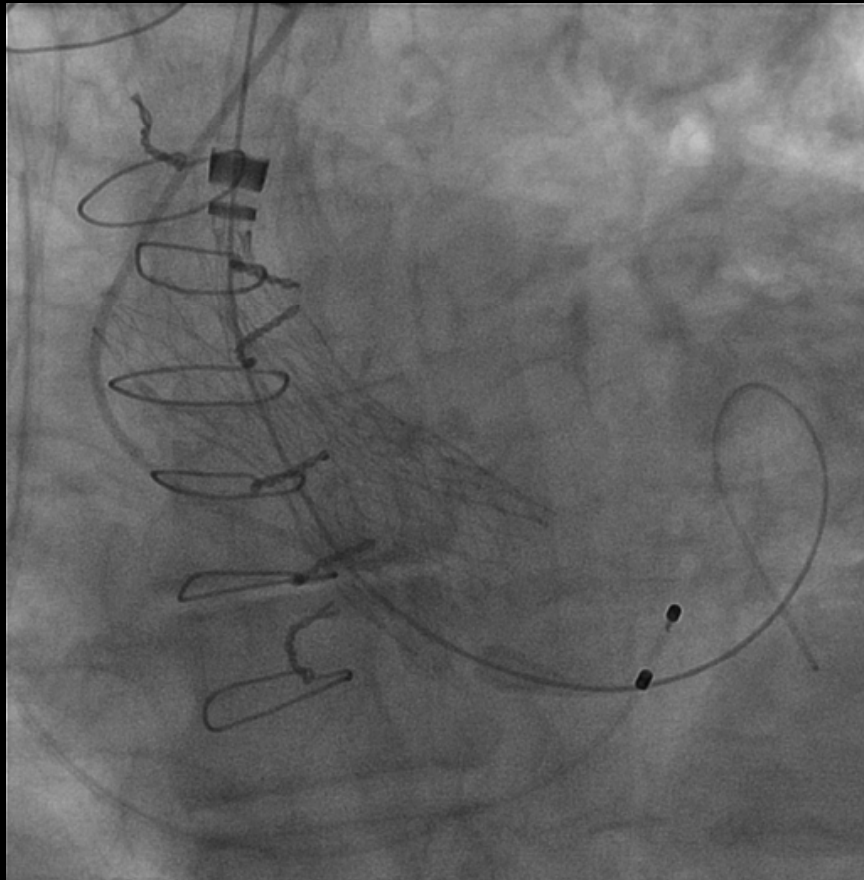


# Medtronic CoreValve Revalving System Deployment

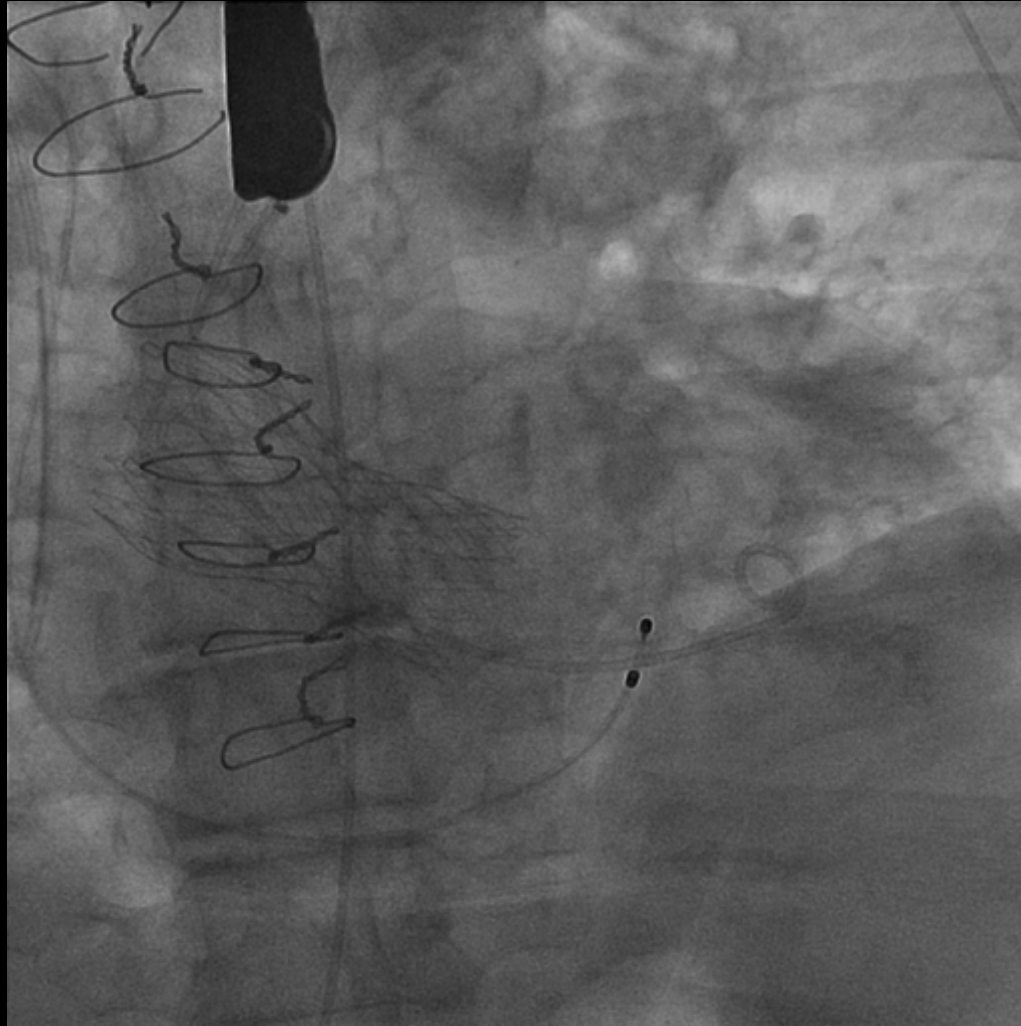


A properly shaped and positioned stiff wire.....

# Final Deployment

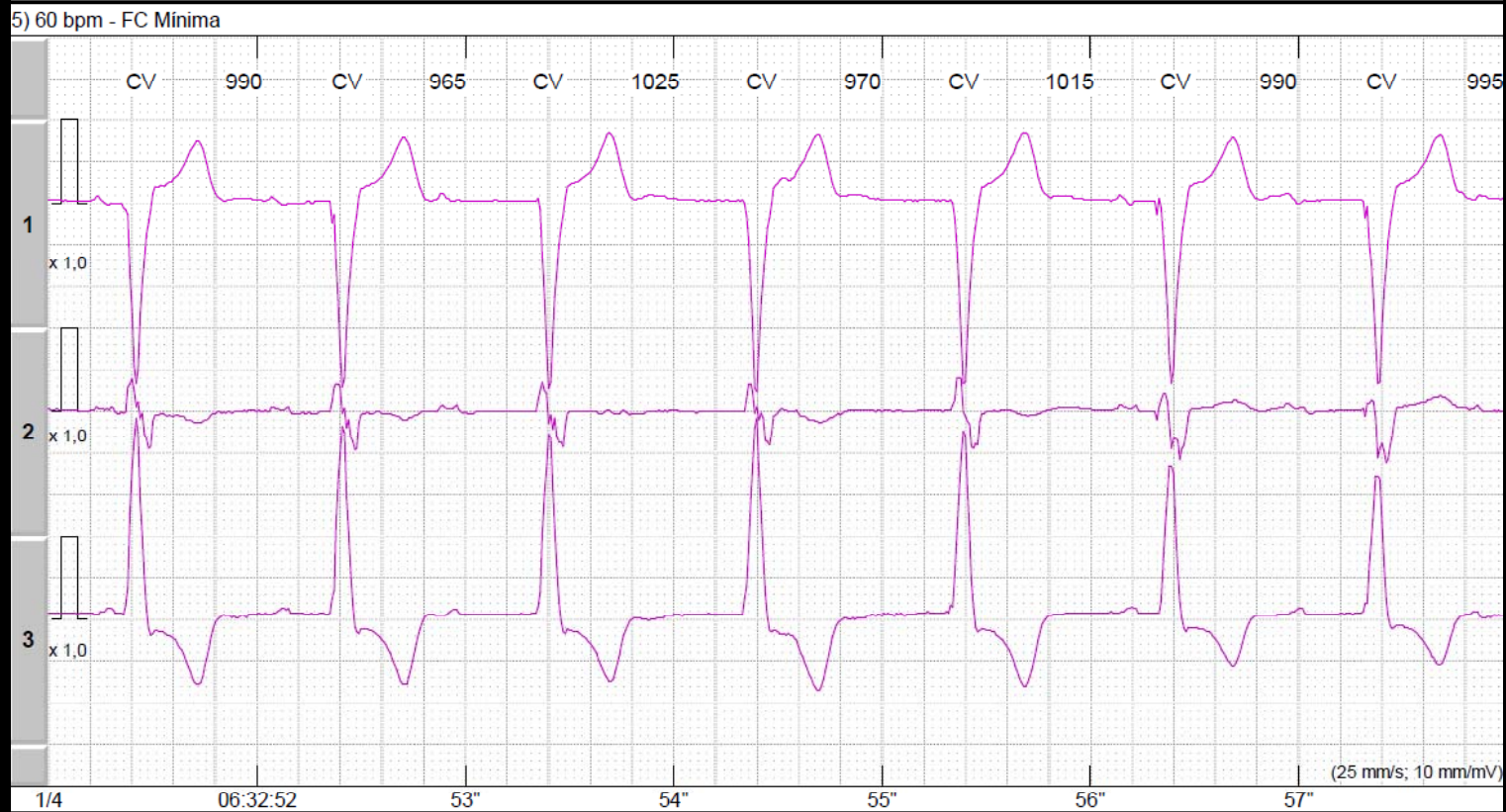


**But in the end...**



**A nice final result**

# During the 3rd day... AVB Definitive pacemaker implanted





**After this long journey...We  
finally can go home!!**

