

# Double Valve Implantation & Risk of Coronary Occlusion



**Hong Kong Society of  
Transcatheter  
Endocardiovascular  
Therapeutics**



**Queen Elizabeth  
Hospital  
Hong Kong SAR**

**Michael KY Lee**

**Queen Elizabeth Hospital, HK  
President, HKSTENT**

**TAVI Summit 2012**



# Case history

- 81/F, BW 43kg, HT 1.6m, BMI 16.8
- DM, HT FU PMH
- Exertional angina/SOB,
- ET 1 FOS
- Echo show normal LV function , LVH, severe degenerative AV, AVA 0.6cm<sup>2</sup>, mean Gr 60mmHg, mod to severe AR
- Mild MR/TR,no sig PHT
- Baseline ECG: SR , normal QRS, St dep V5-6



- Coro in private show mRCA disease with DES stenting in 2/2012
- Referred by private cardiologist for TAVI

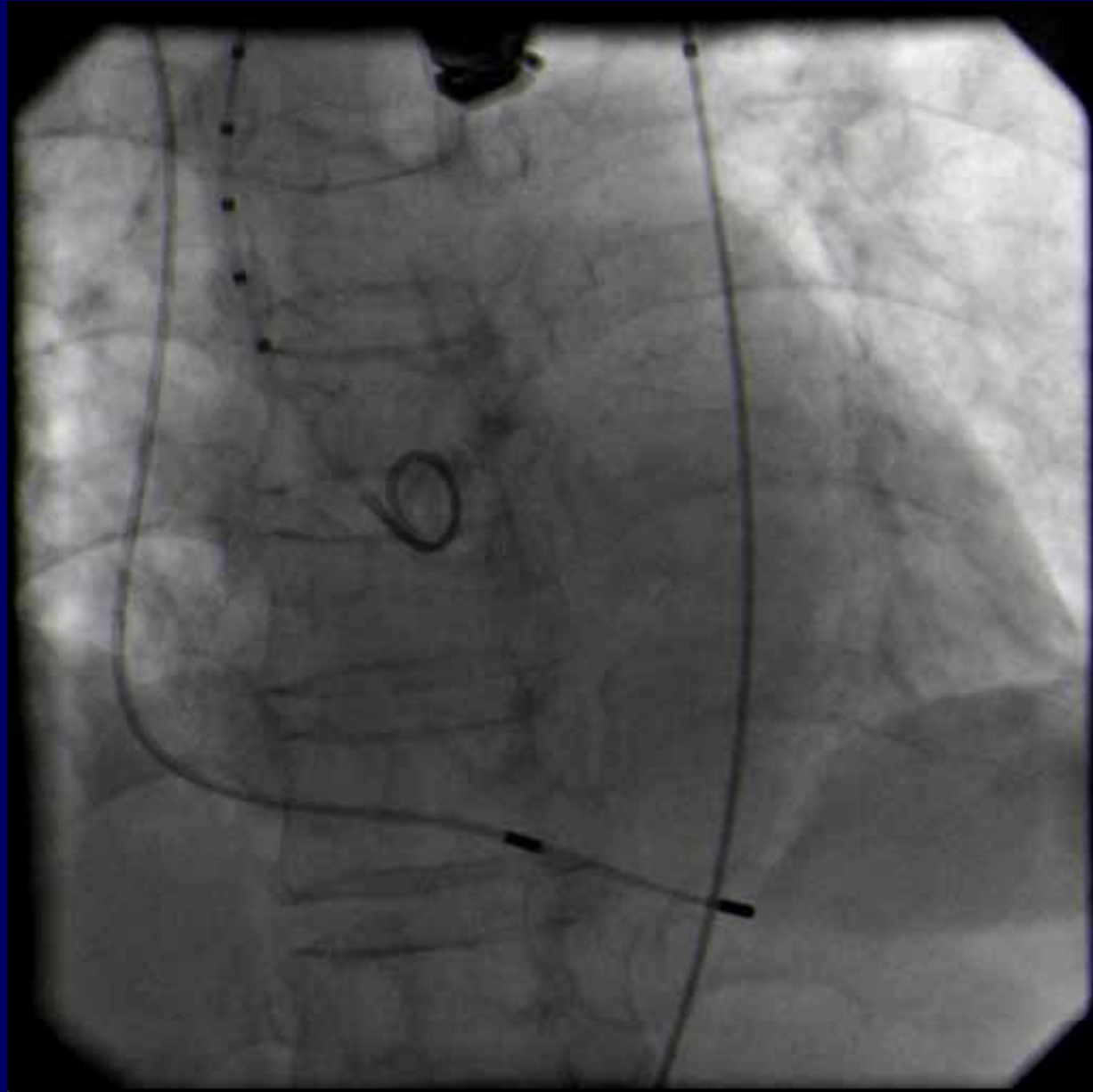


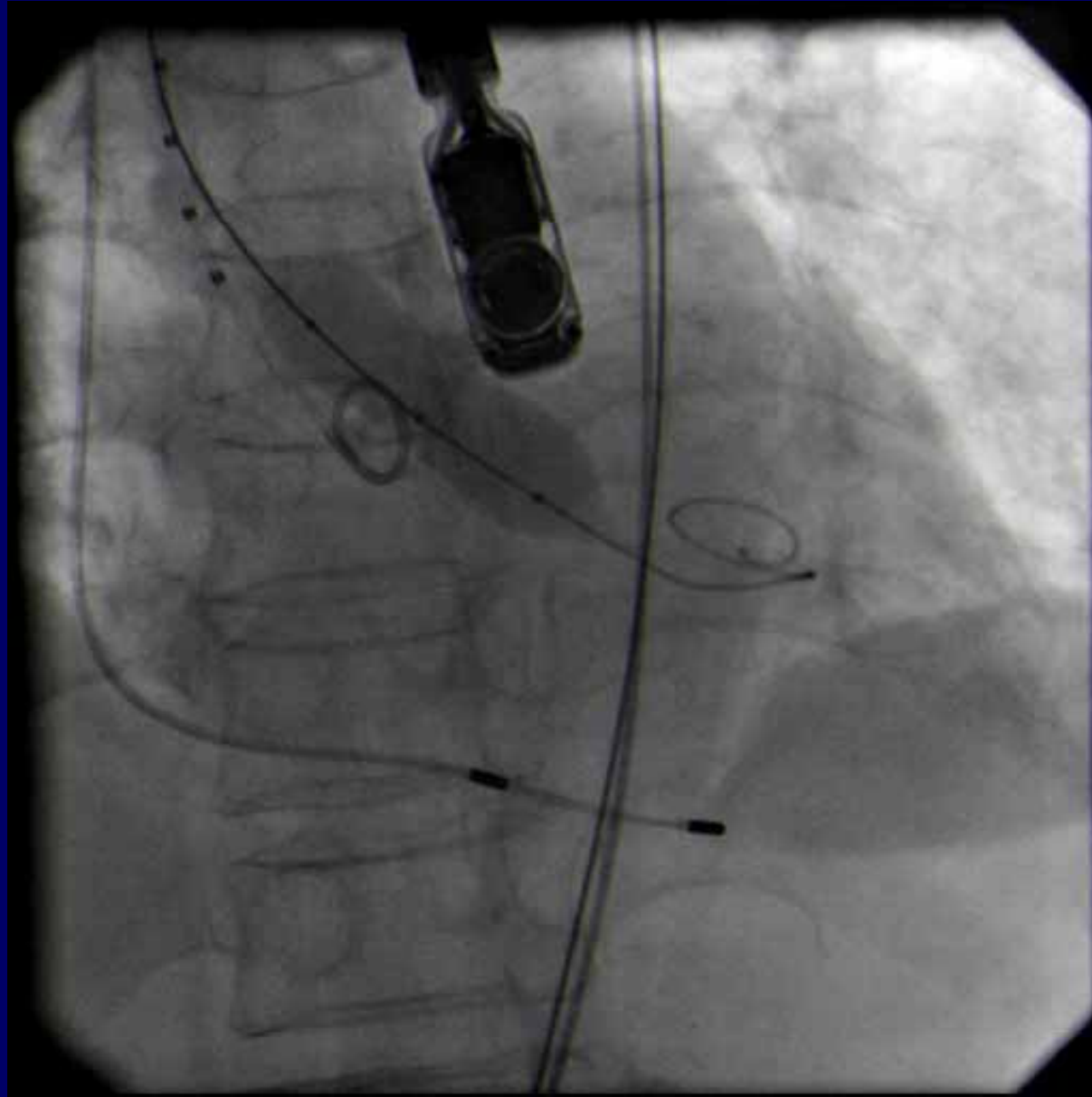
- Echo parameter
  - TTE: Aortic annulus 2.11cm (1.9cm by Medtronic core lab)
  - Sinus of valsalva 2.63, STJ 2.09, Sinus height 1.83cm
  - TEE: aortic annulus 2.11cm, AsAo 3.42, sinus valsalva 2.83cm, STJ 1.85, mod AR, moderate immobile atherosclerosis of descending aorta, PFO with tiny L->R shunt

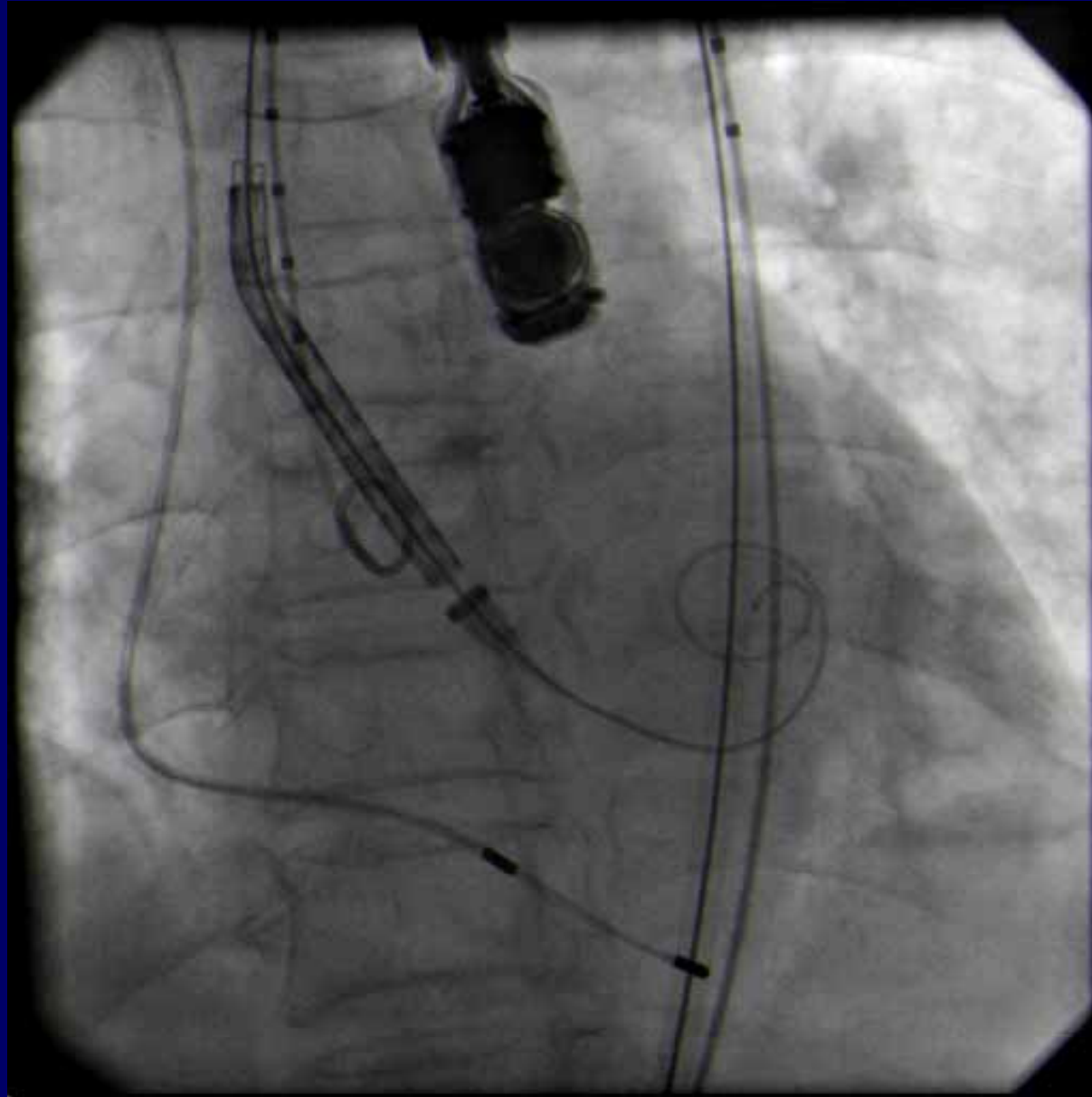


- CT parameter
  - RFA 7mm, LFA 7.5mm
  - Atherosclerotic aorta, with ? Plaque/thin intimal flap at distal arch
  - Aortic annulus 18 x25mm
  - Root 30mm, STJ 24 x 26mm
  - Coro os to annular plane 12-13mm

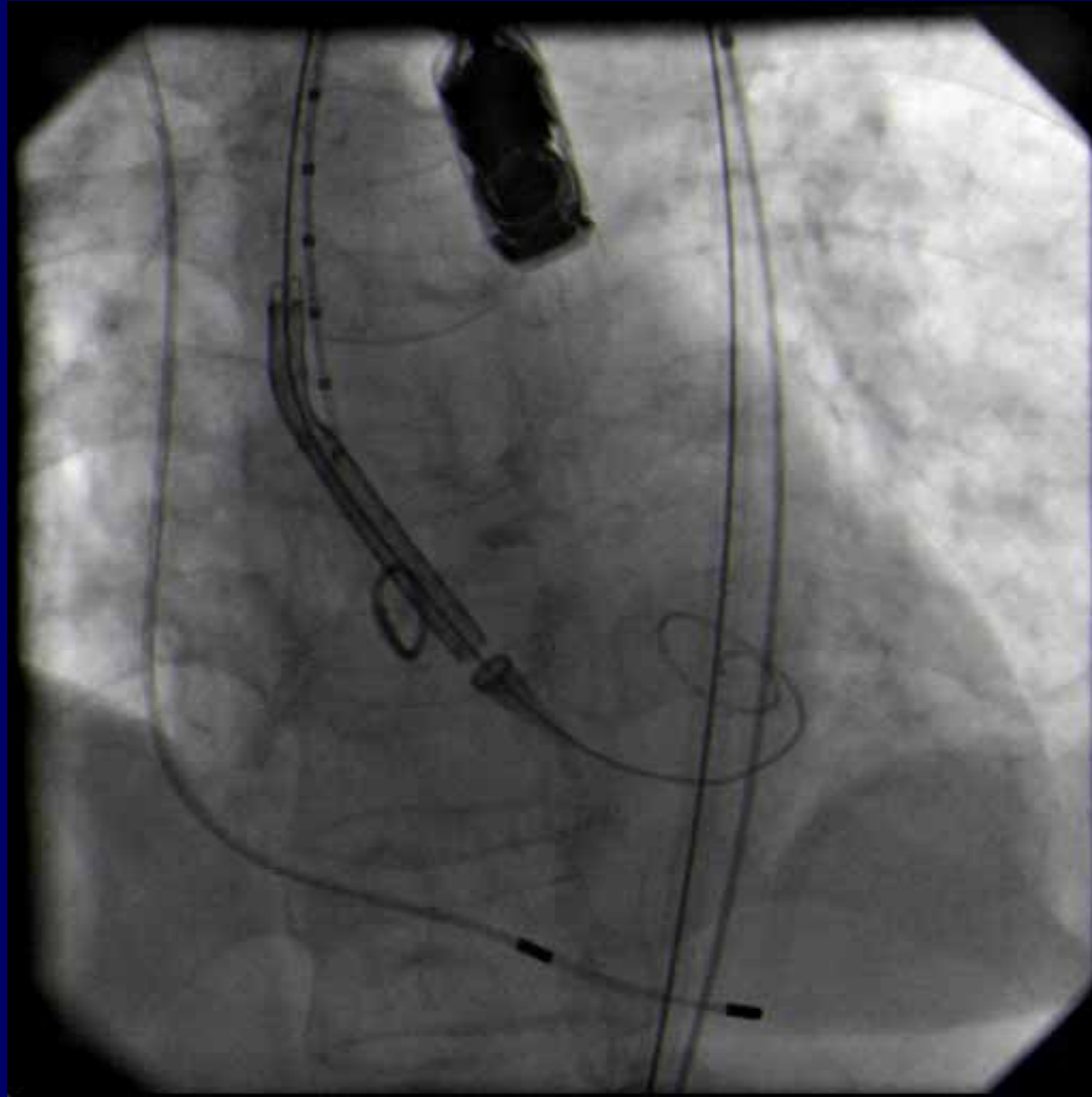


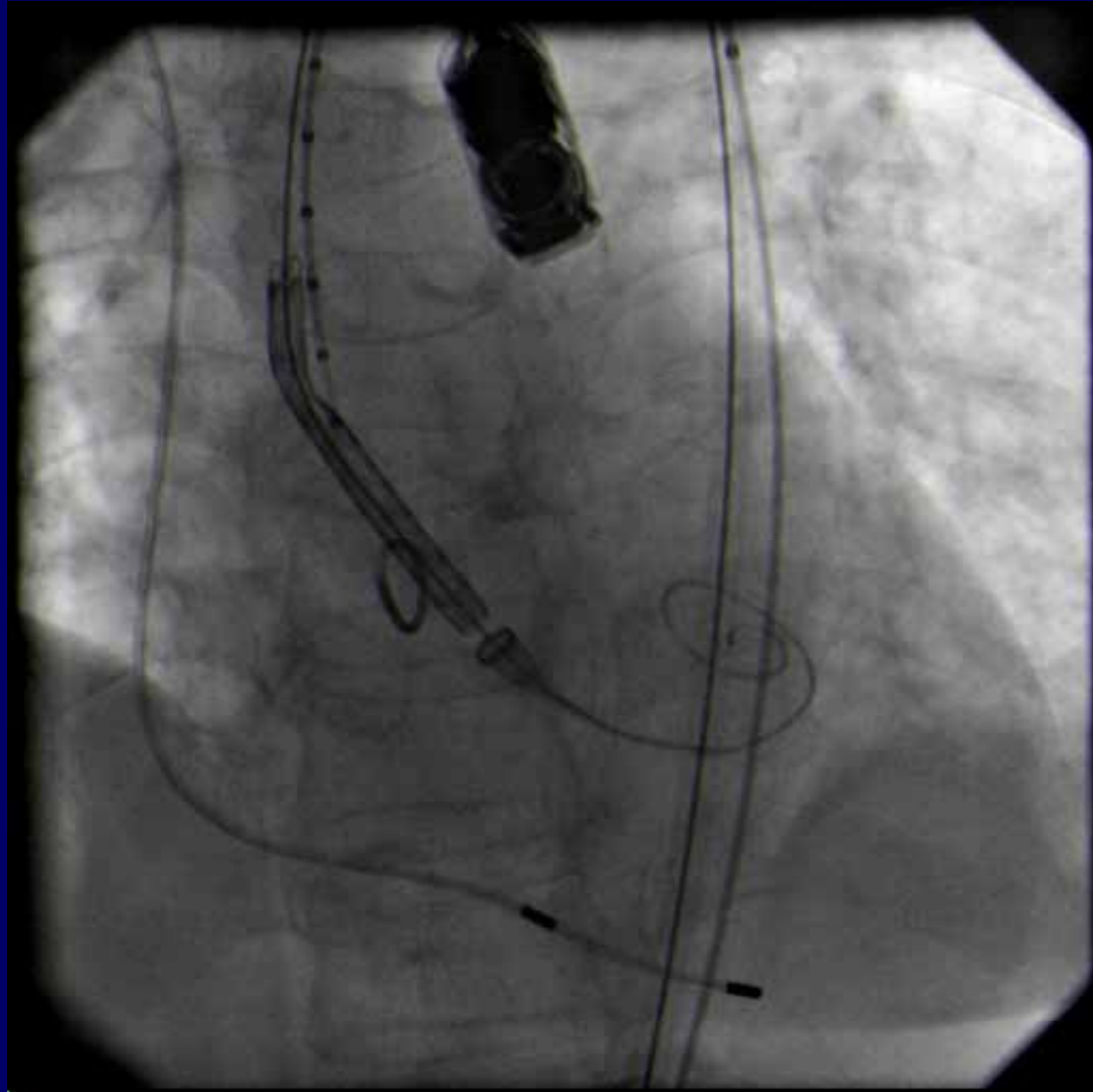


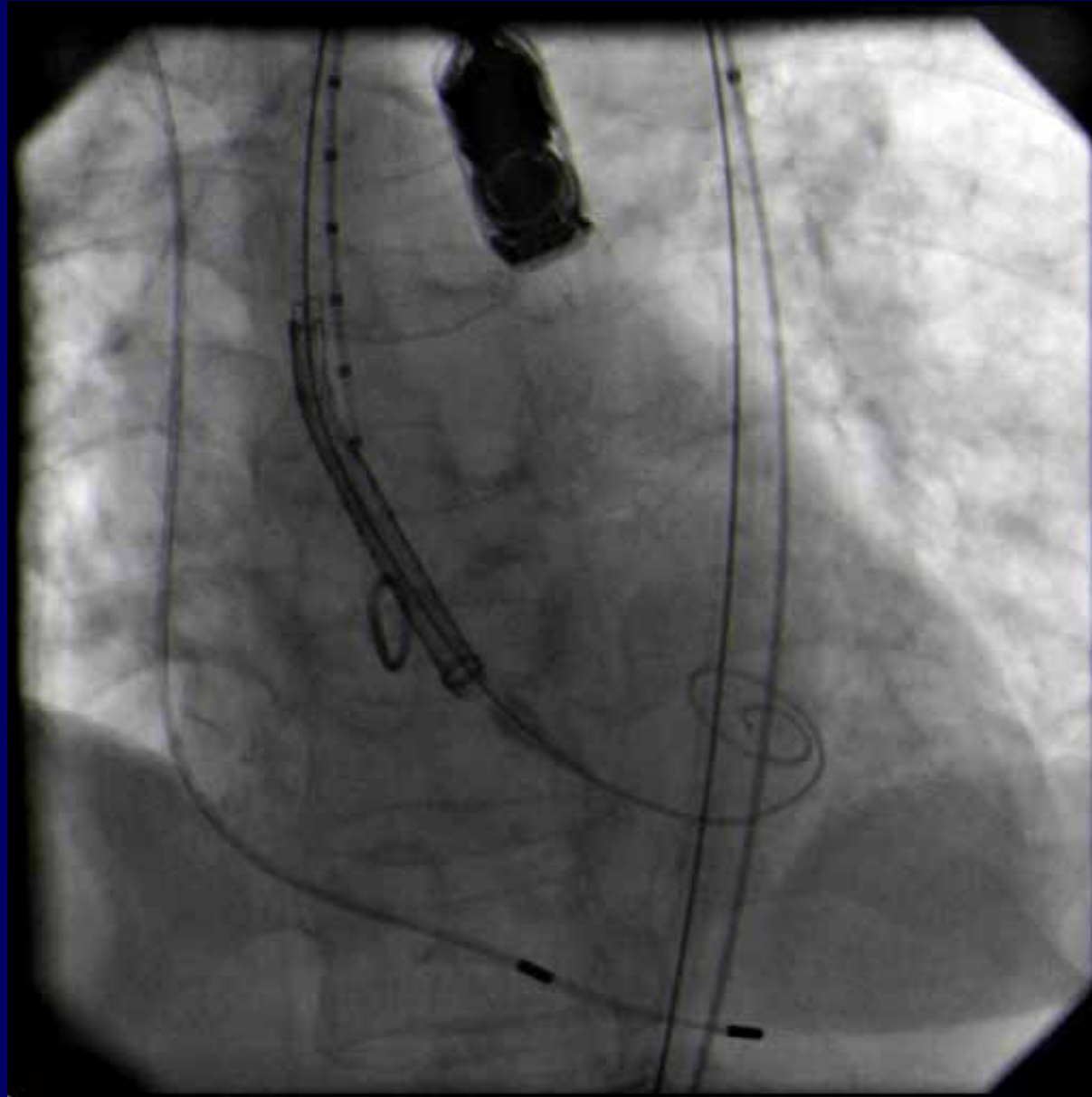


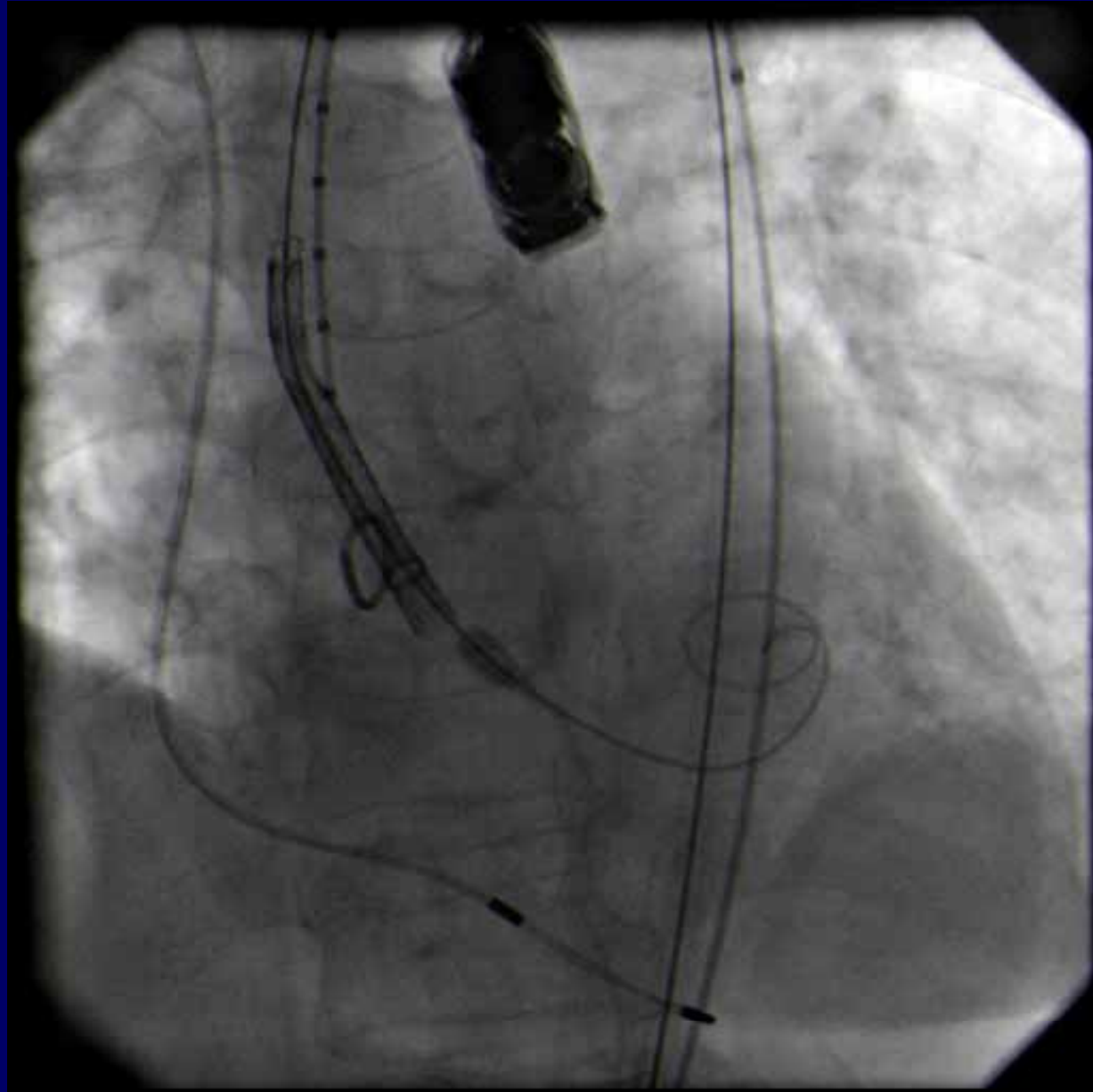


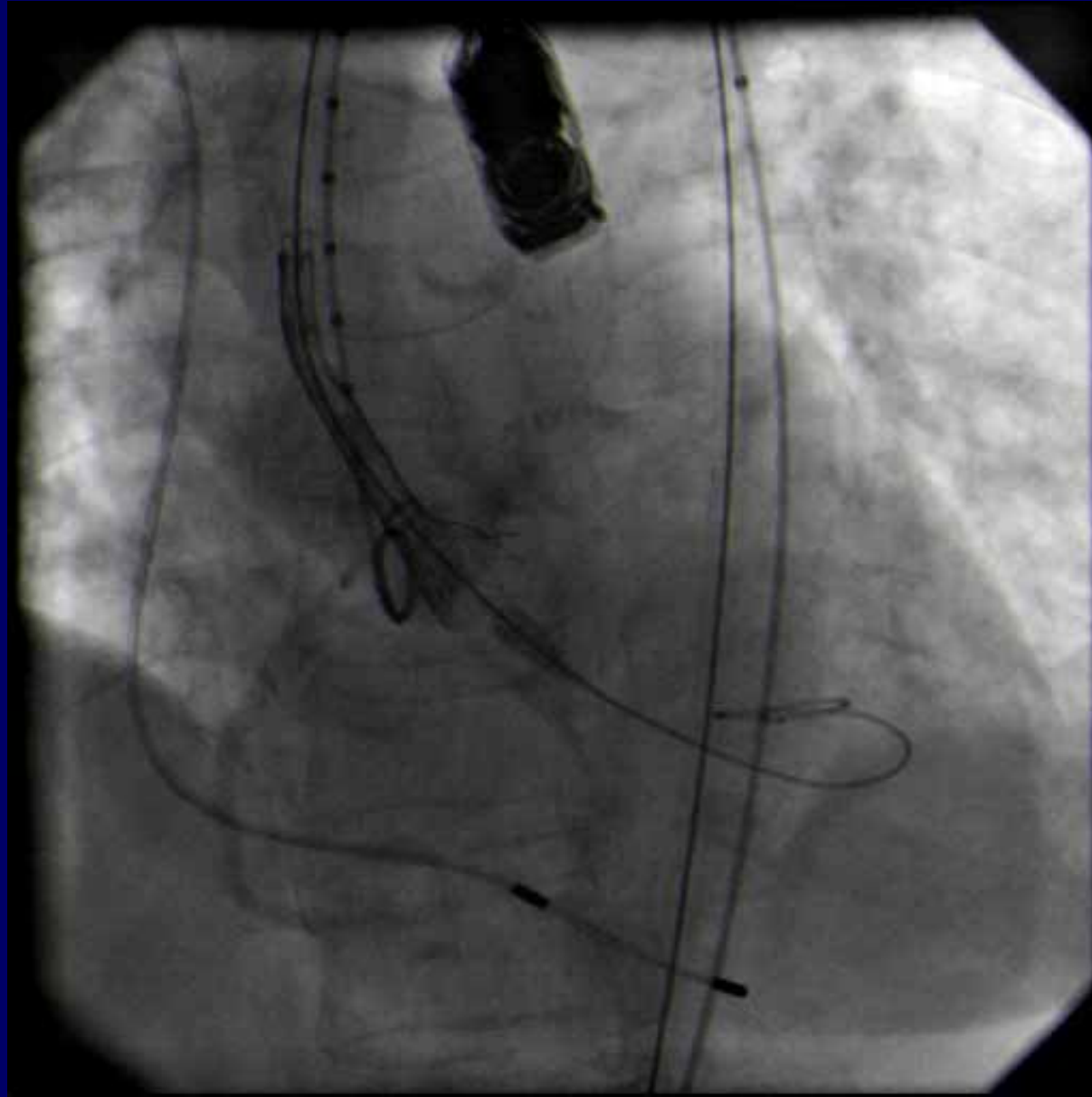


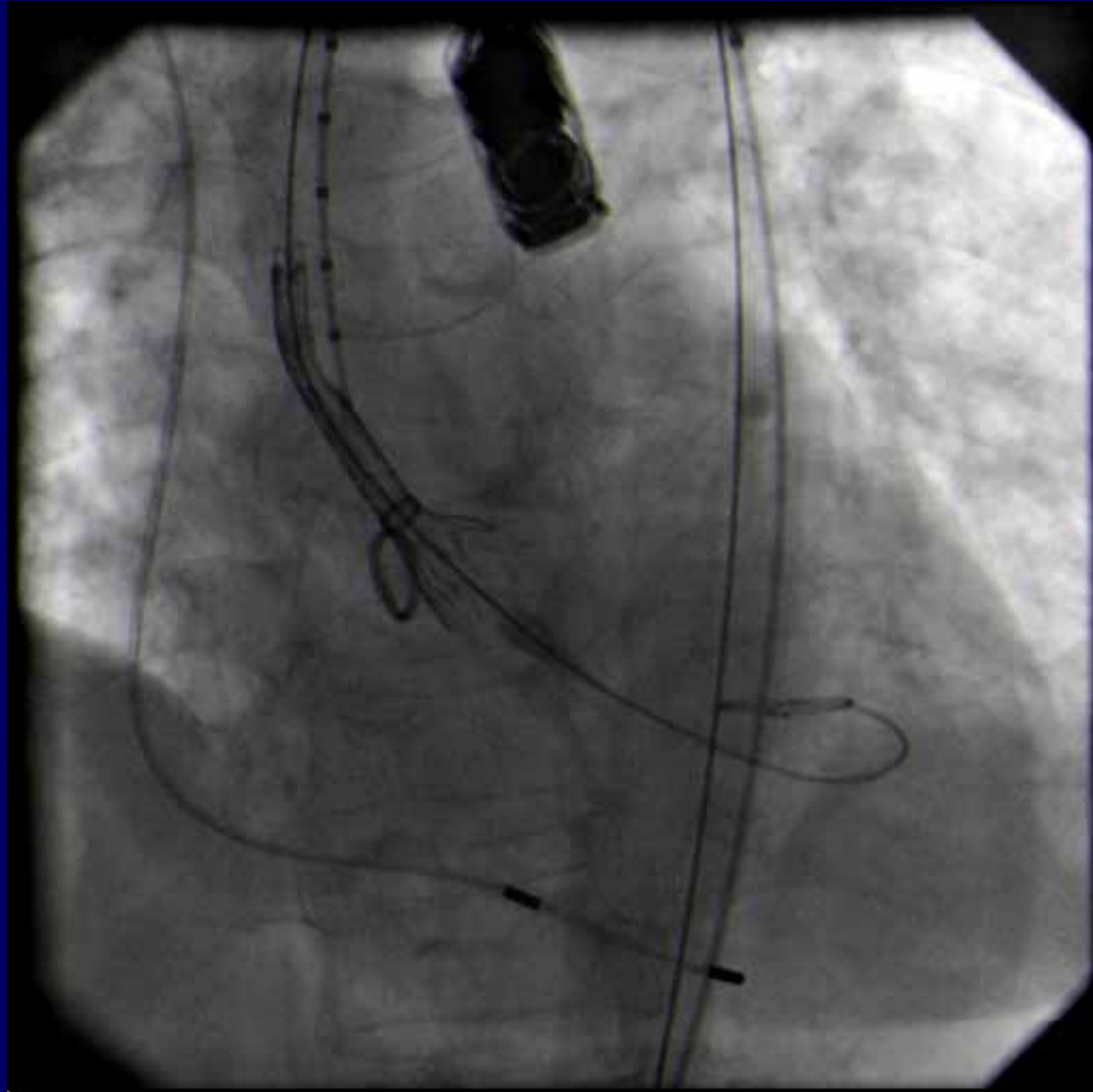


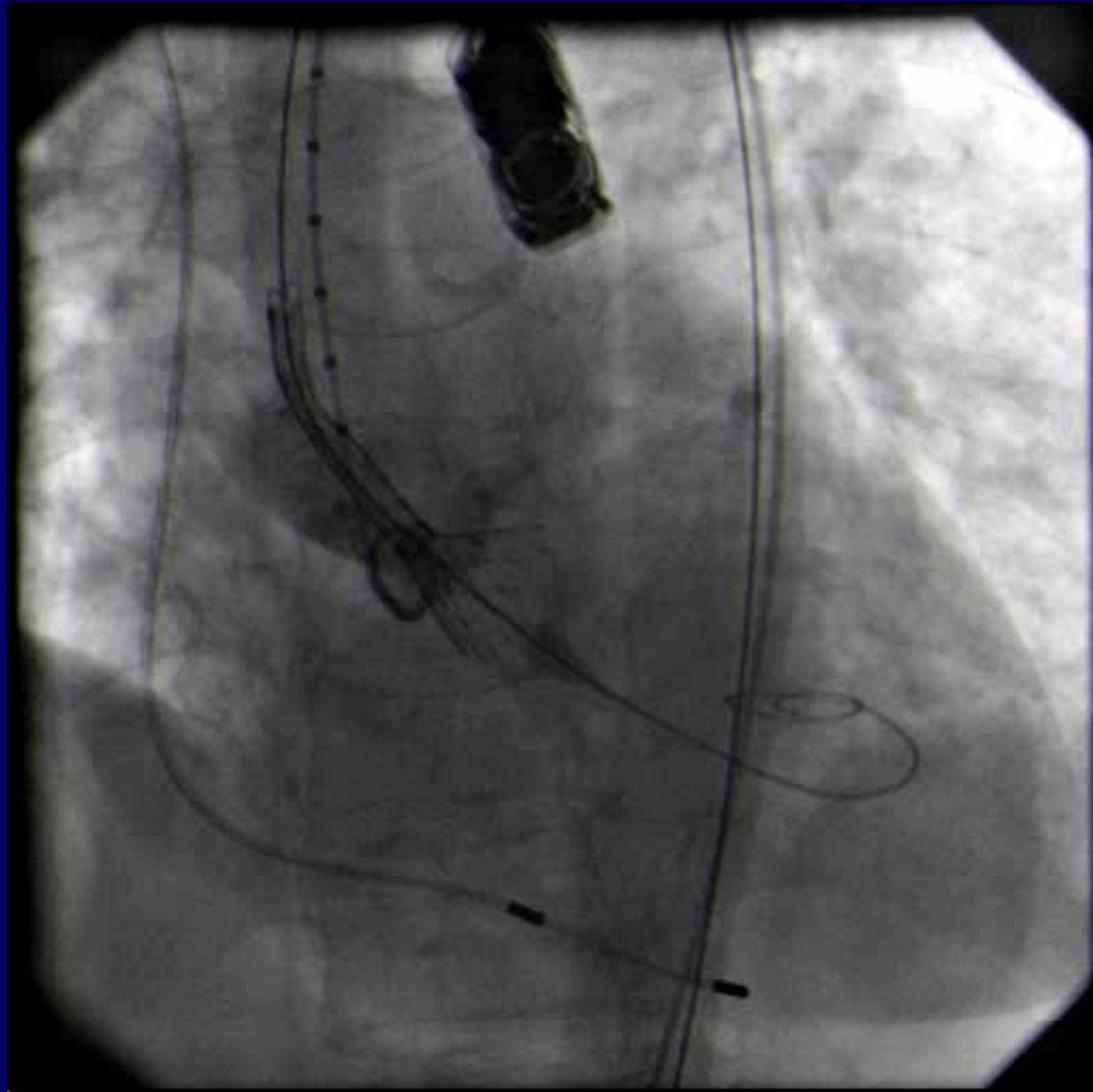


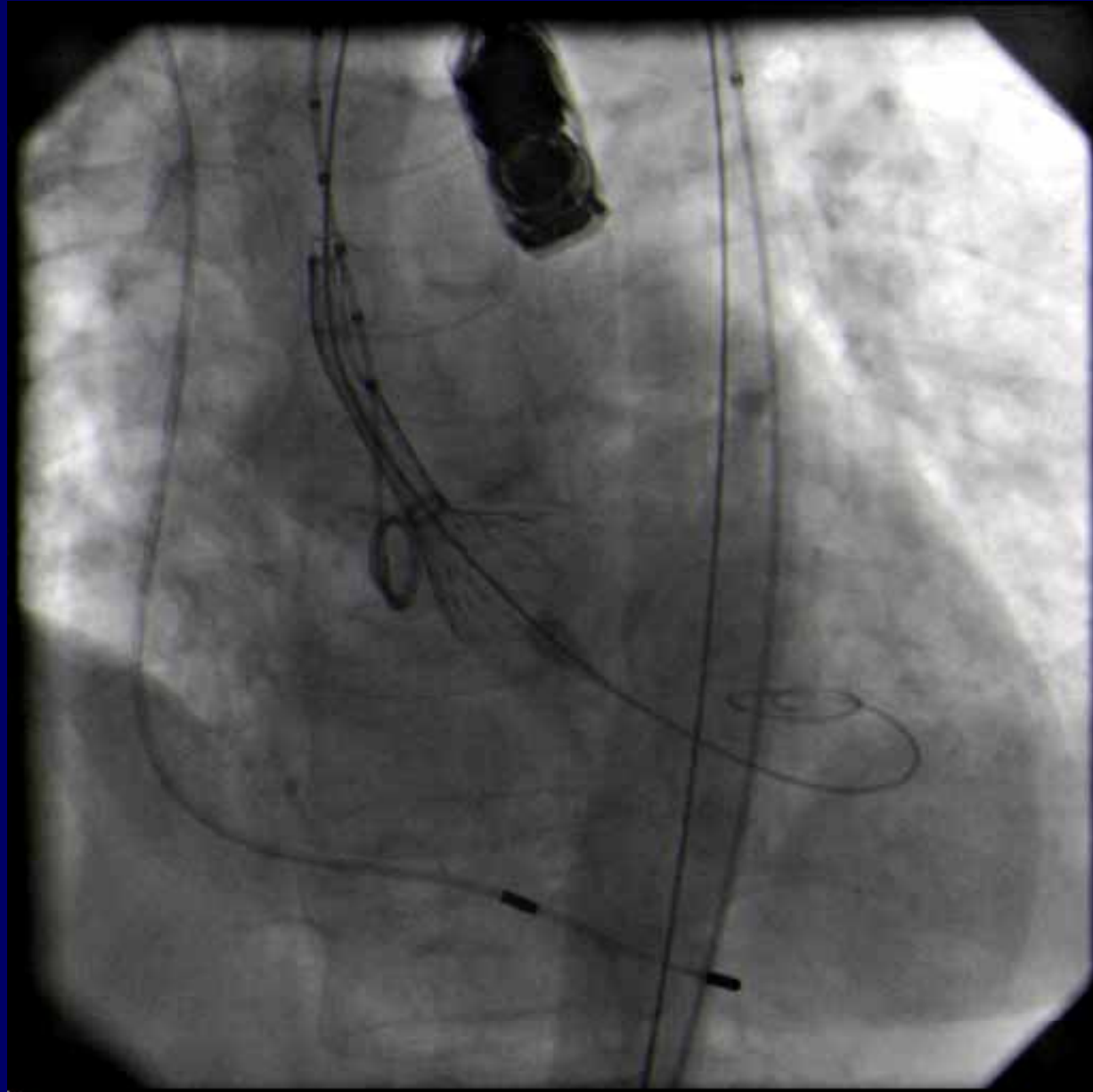




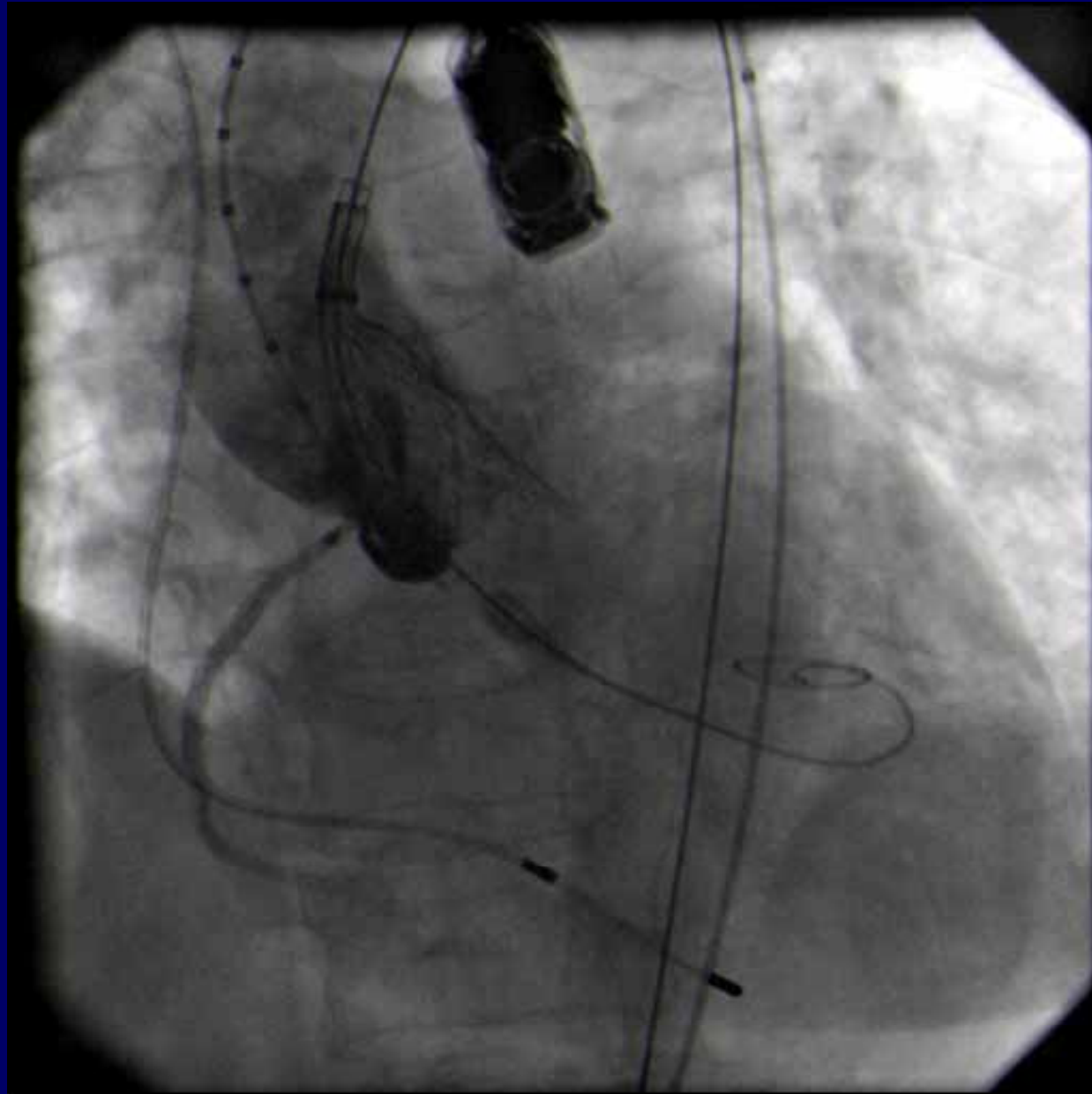


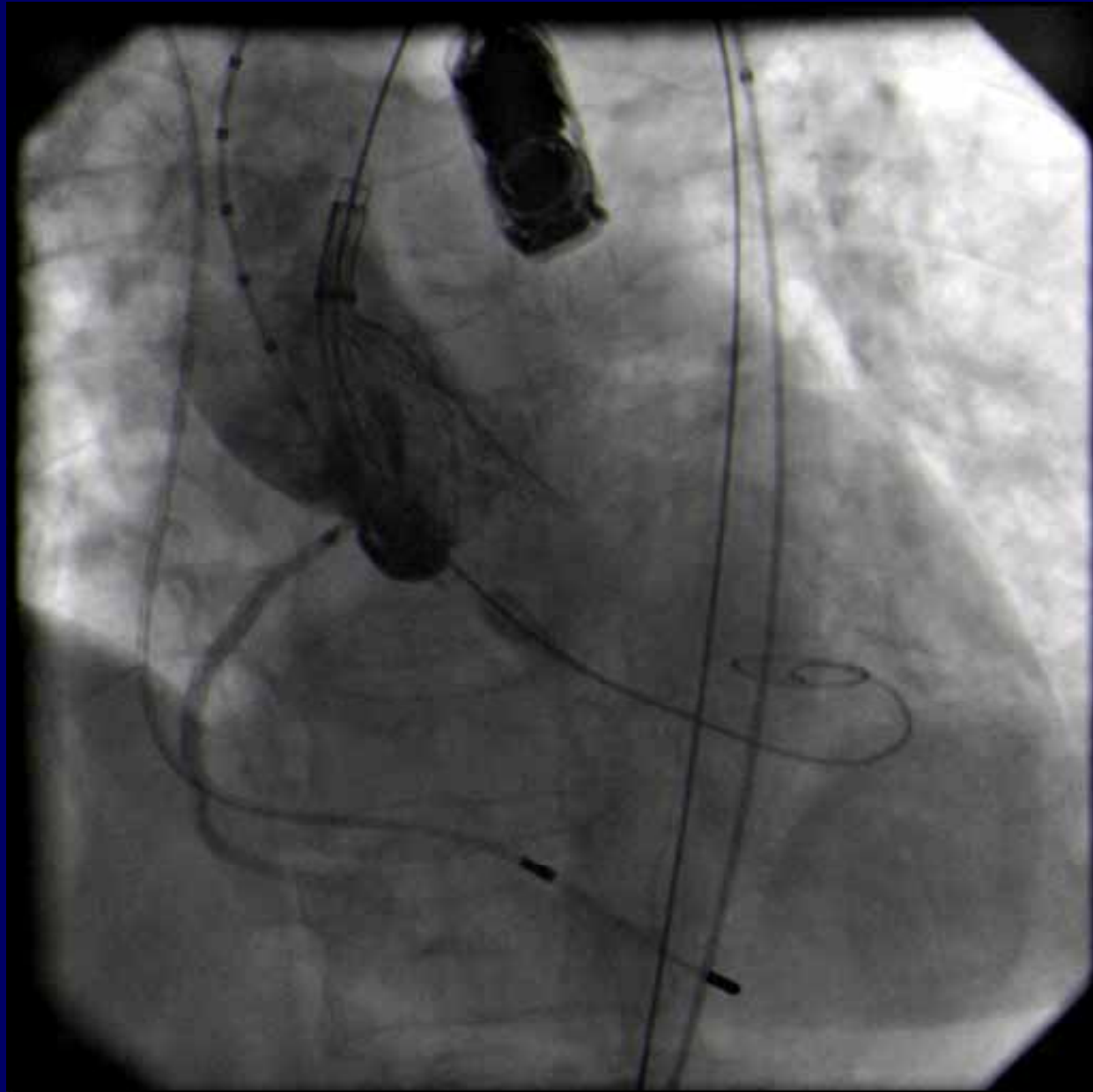


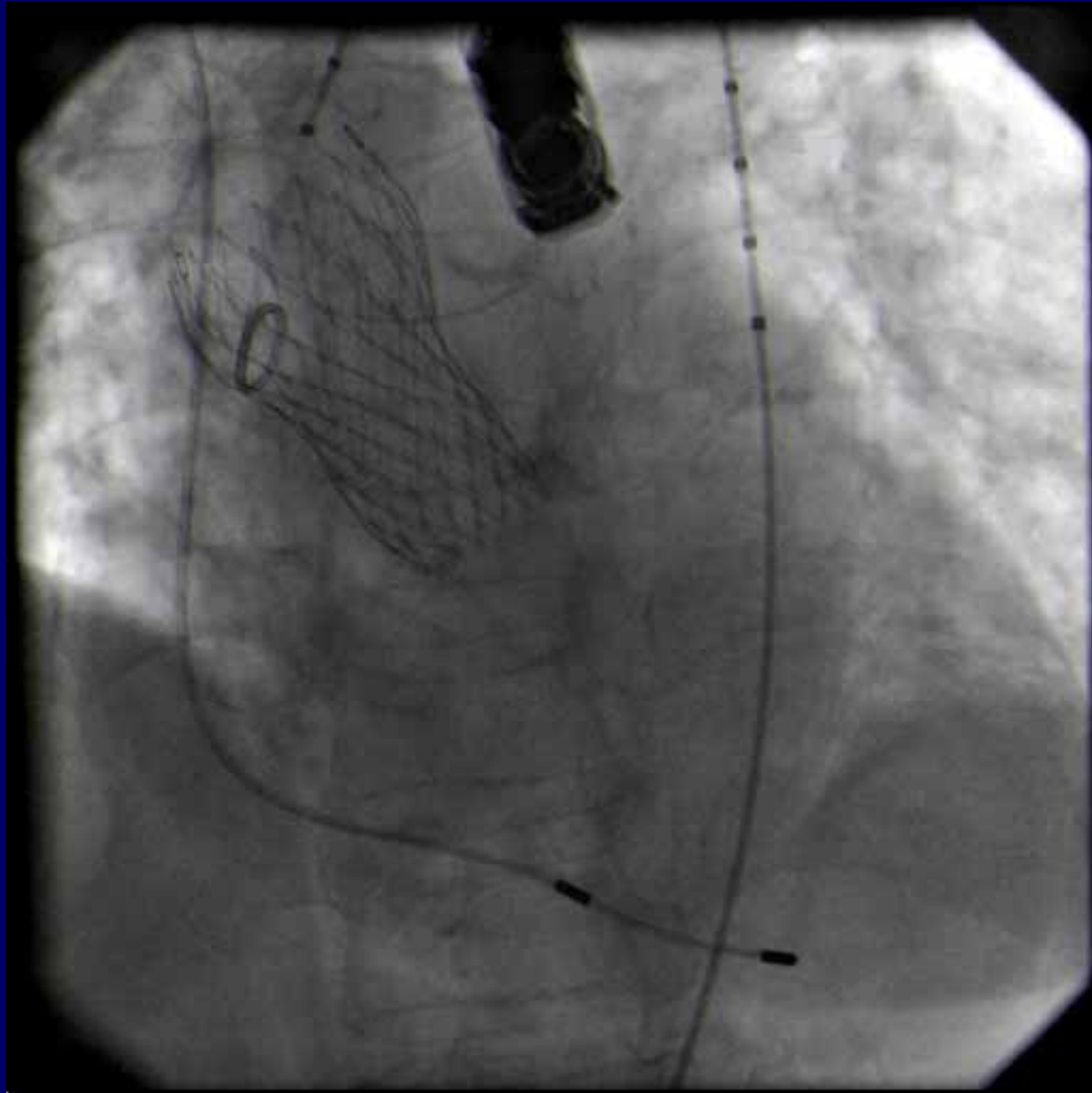








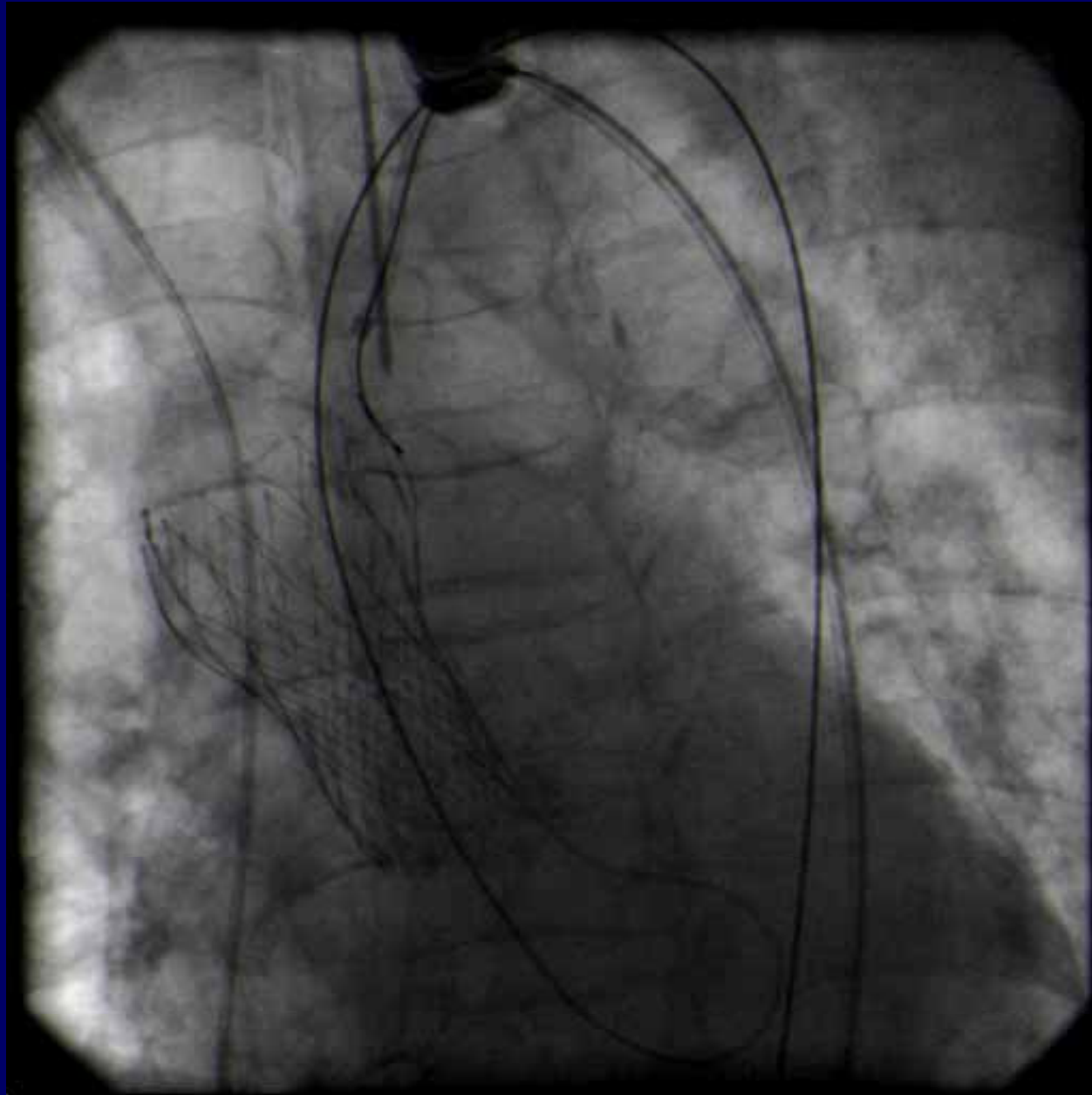


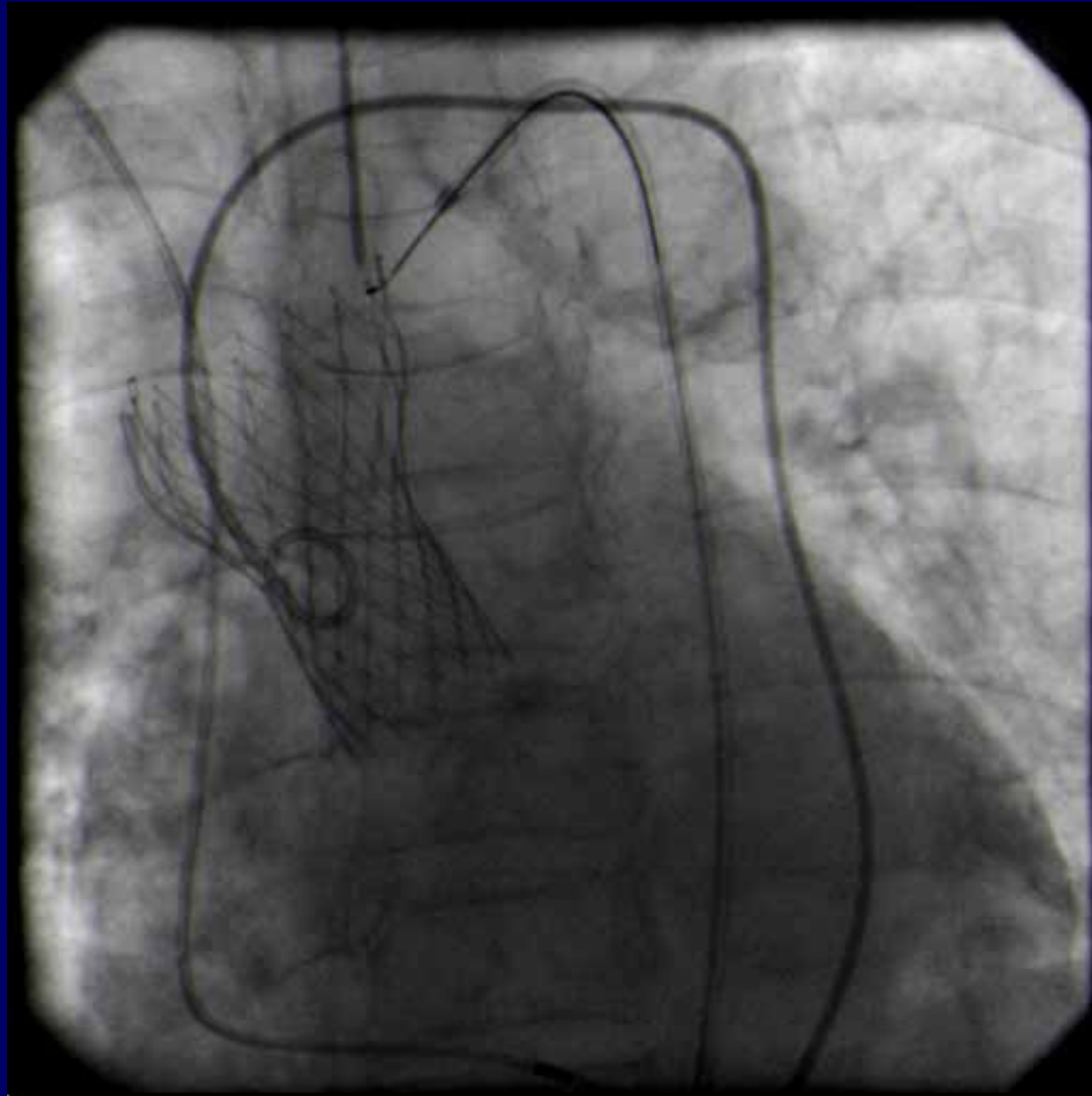


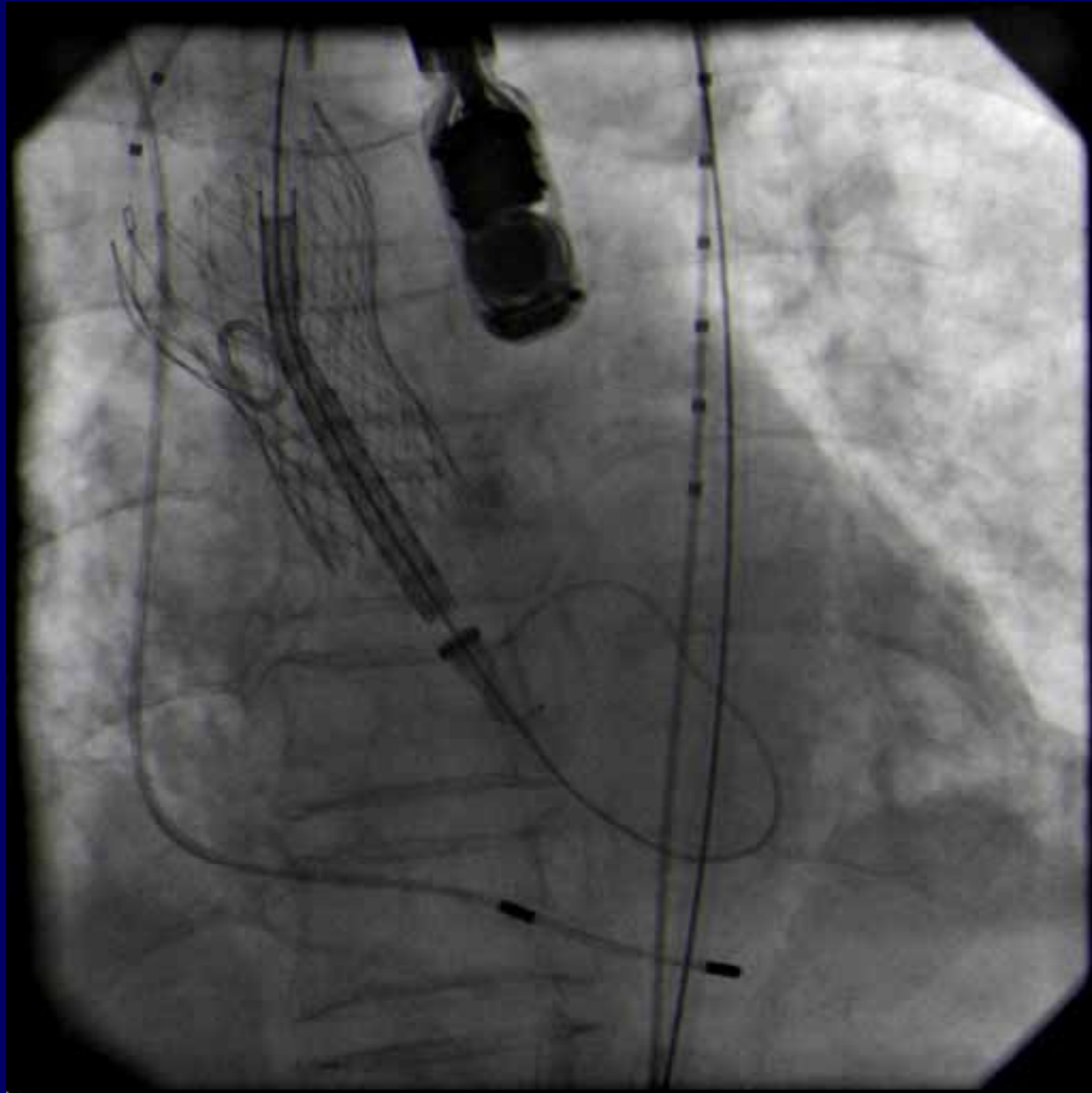
# Acute Coronary Occlusion following TAVI

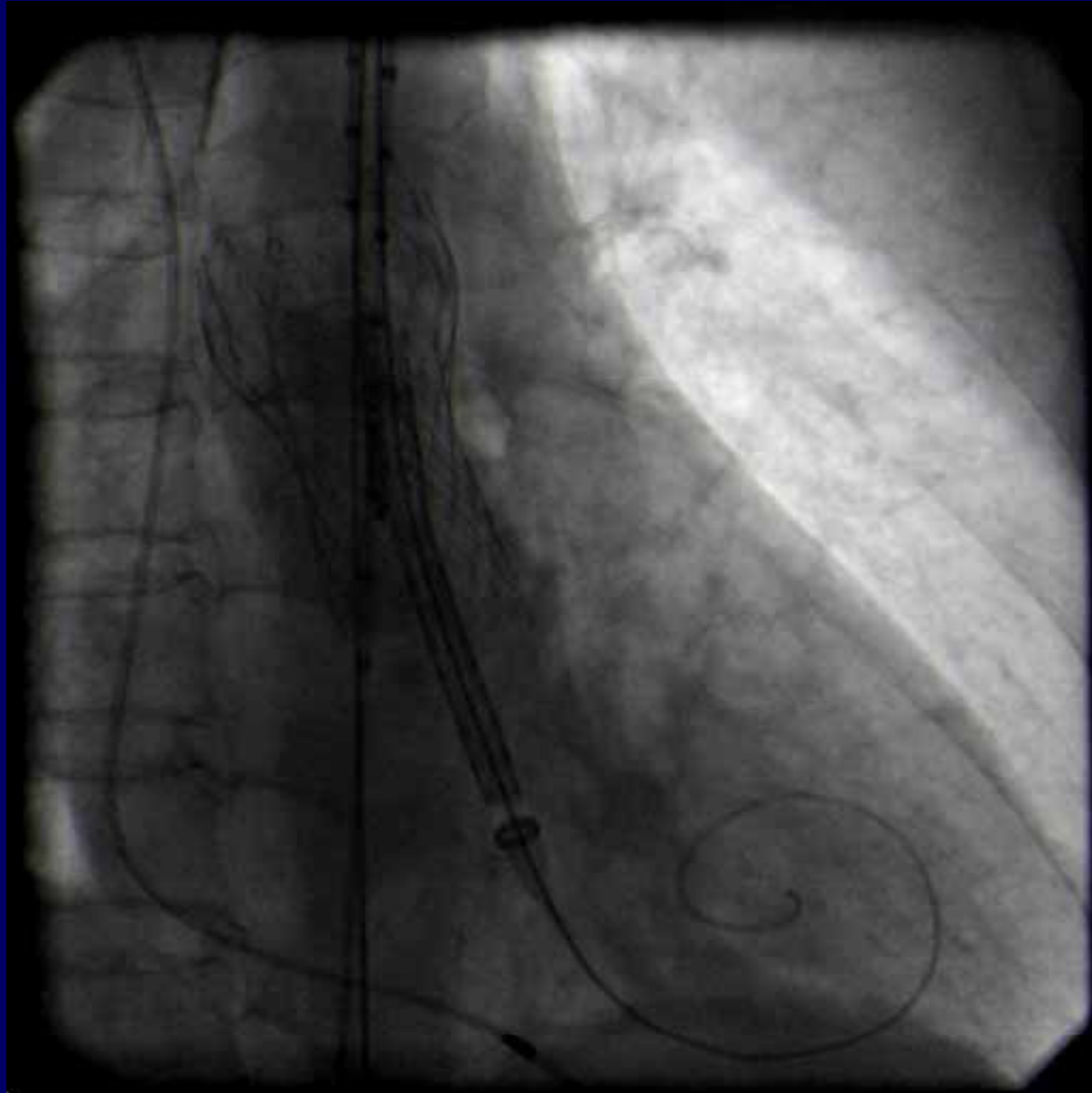
1. Coronary ostia are unusually low, <10-14mm from base of leaflets
2. Displacement of a bulky, calcified native leaflet over a coronary ostium
3. Dissection of the aortic root in the region of the coronary ostia



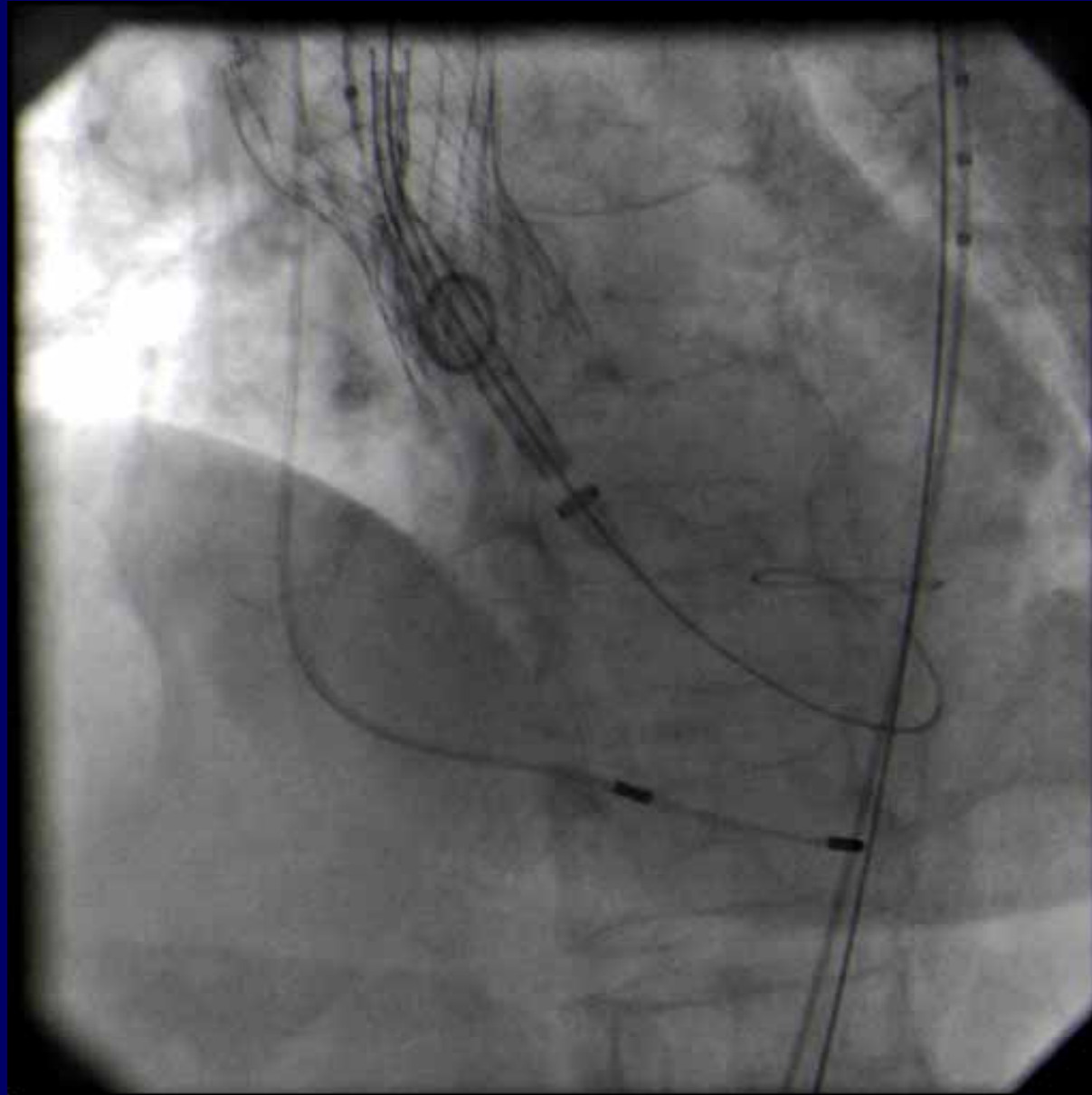


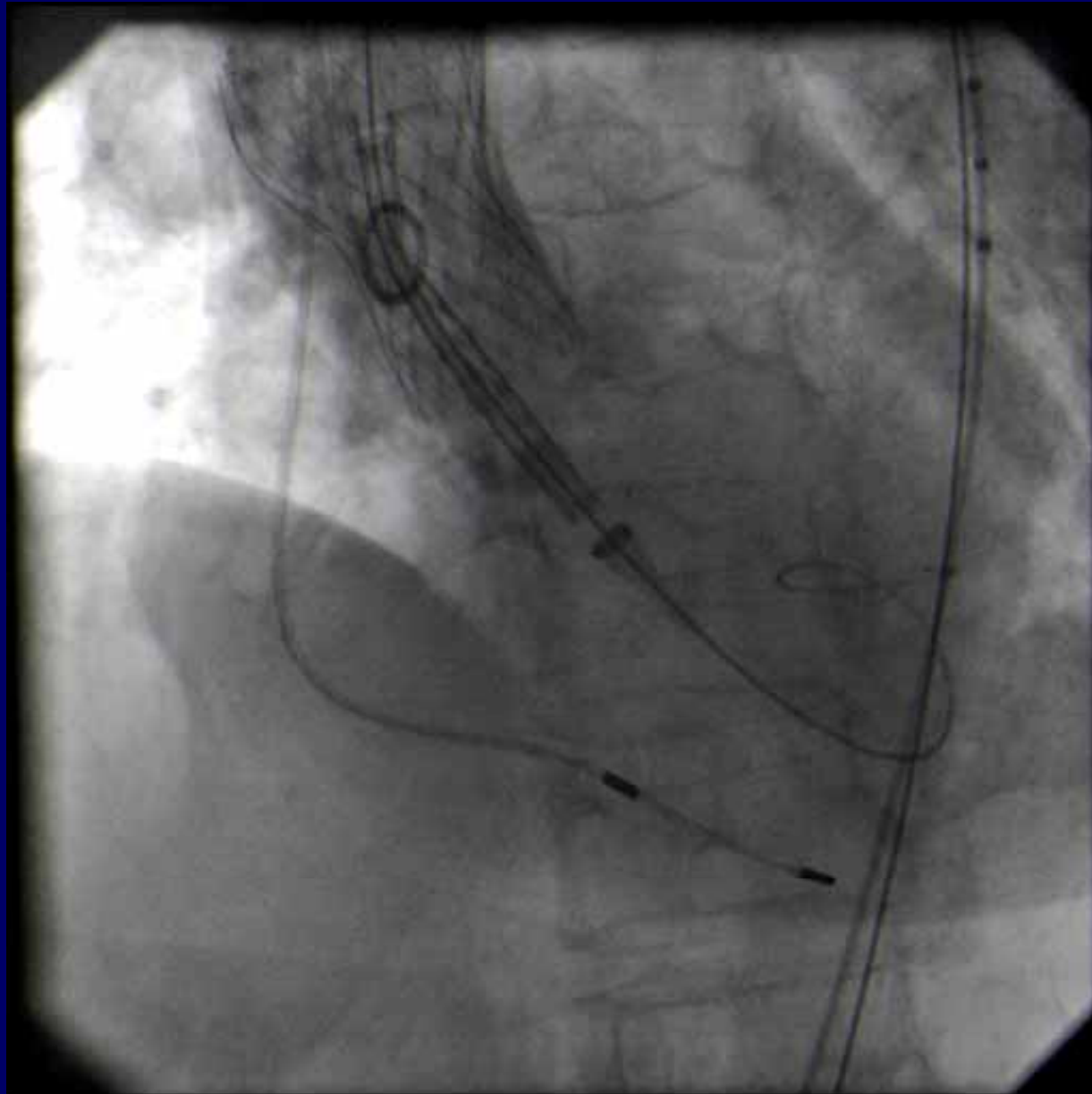


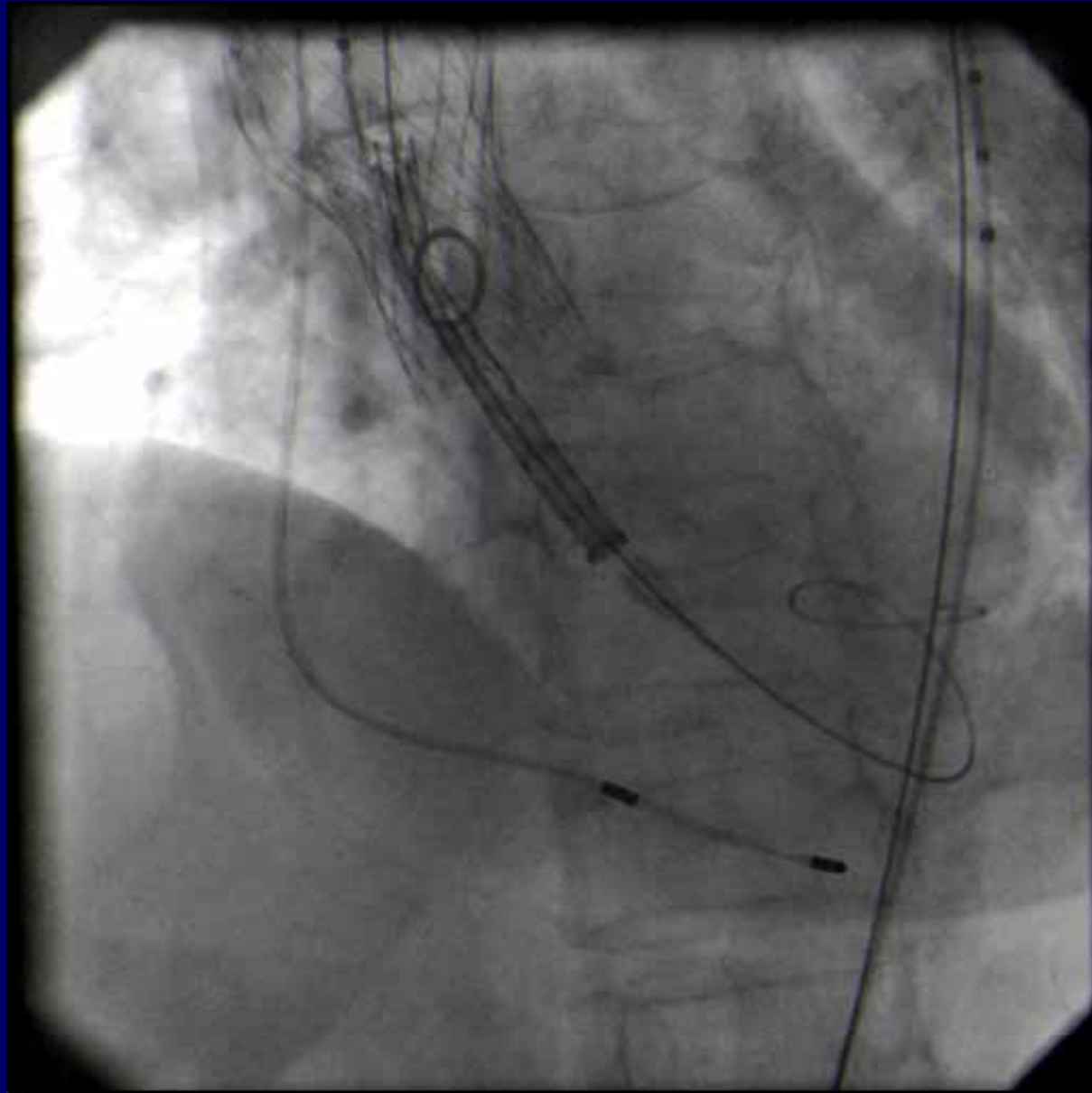


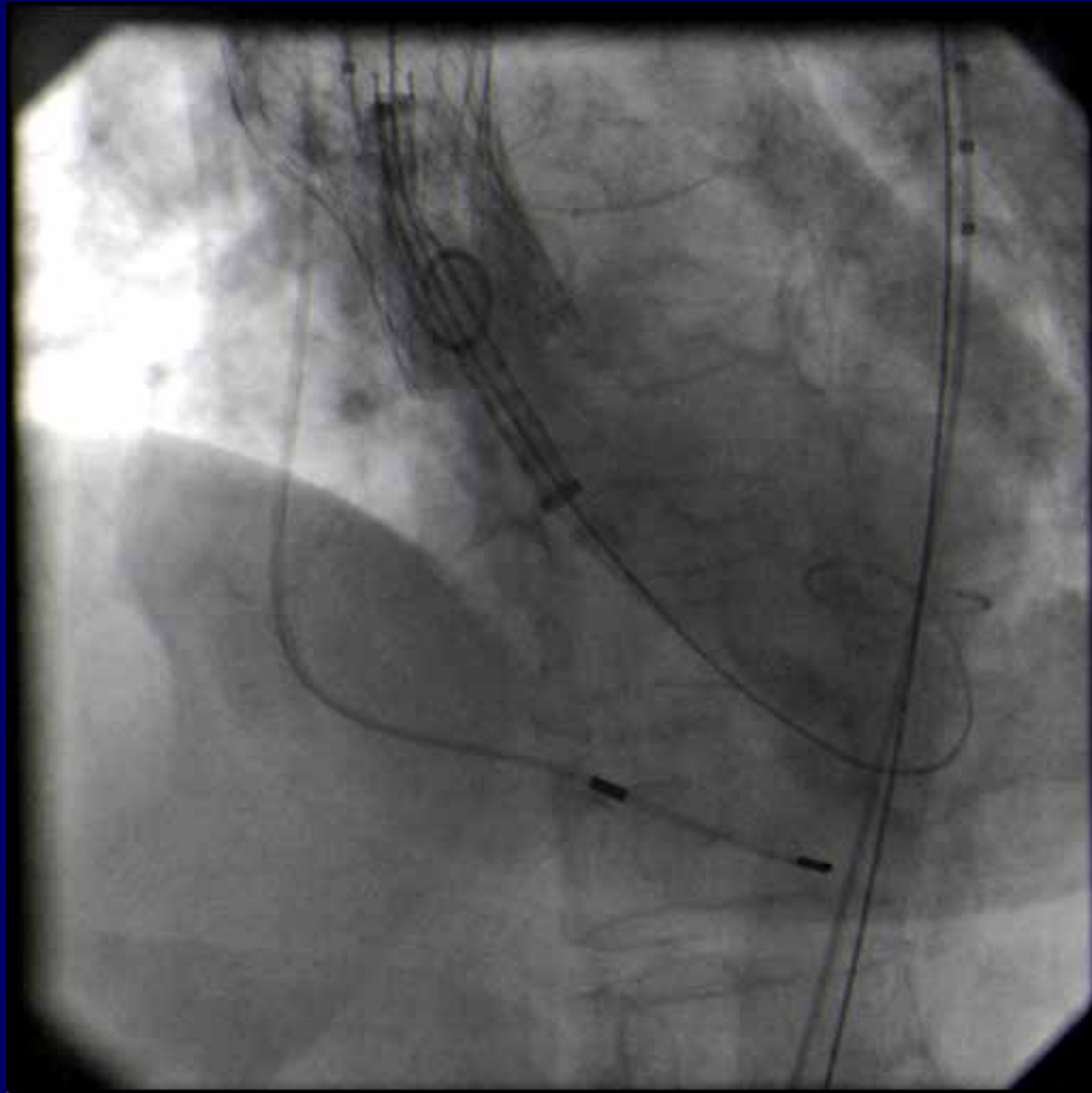


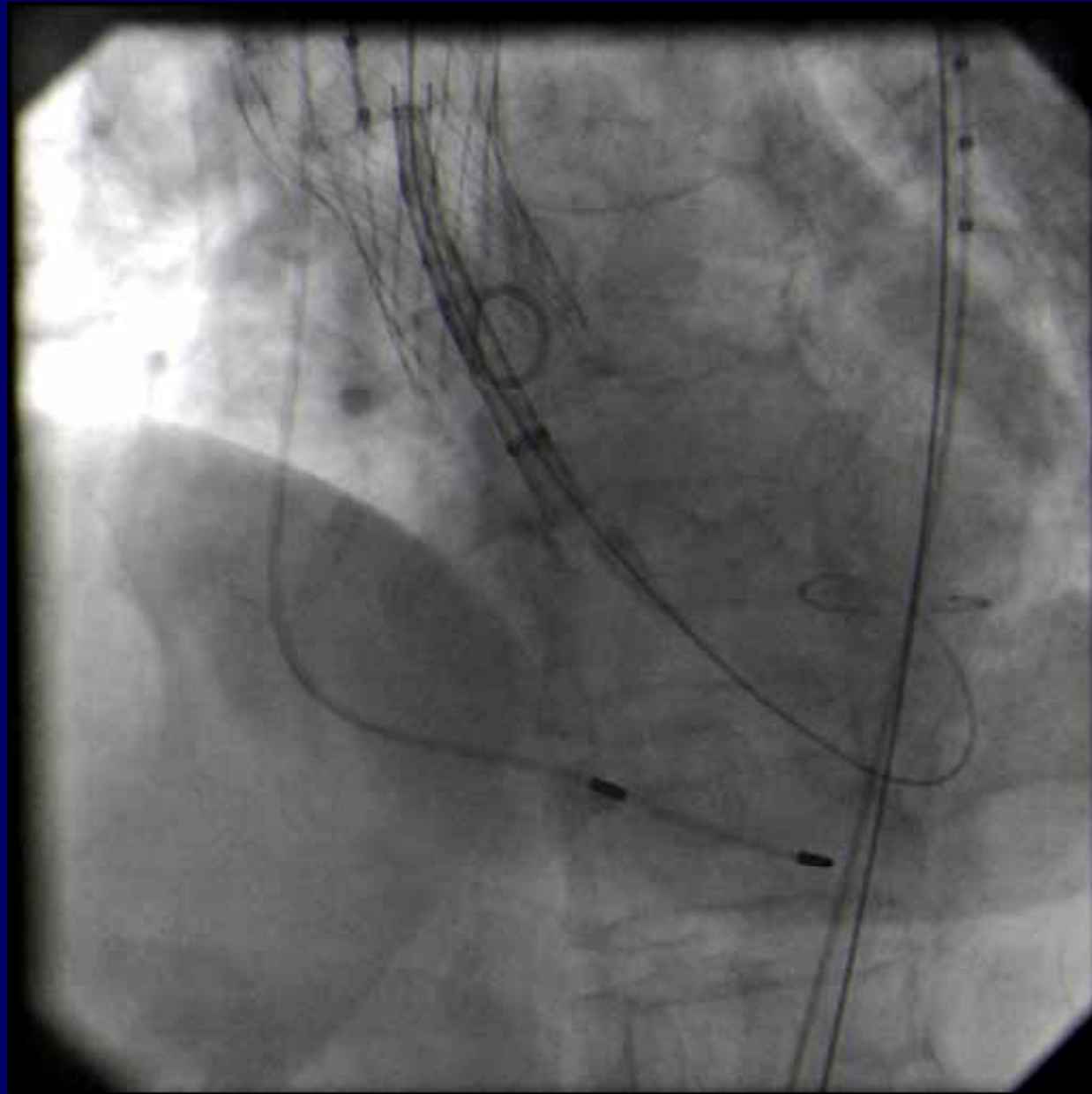


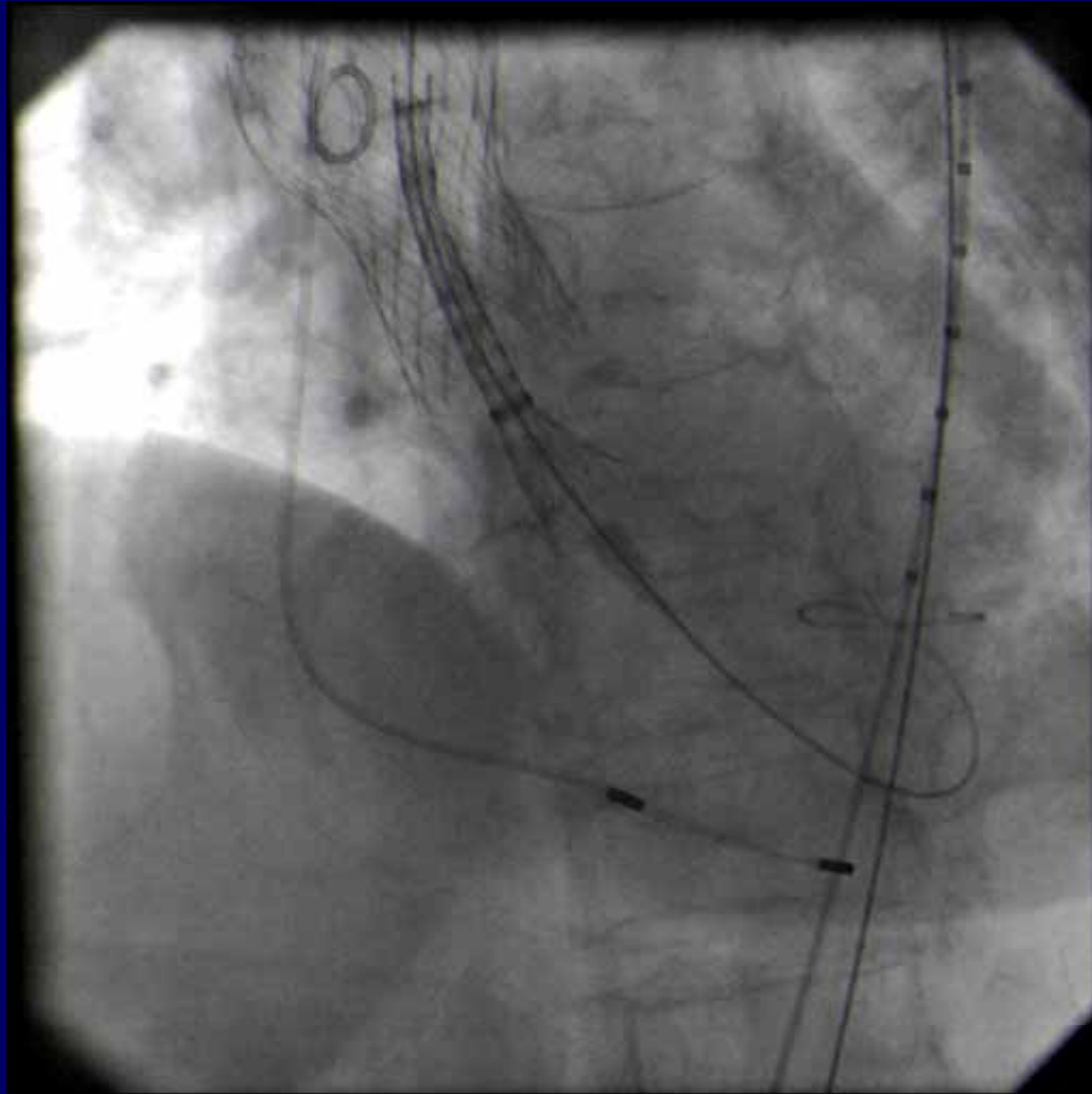




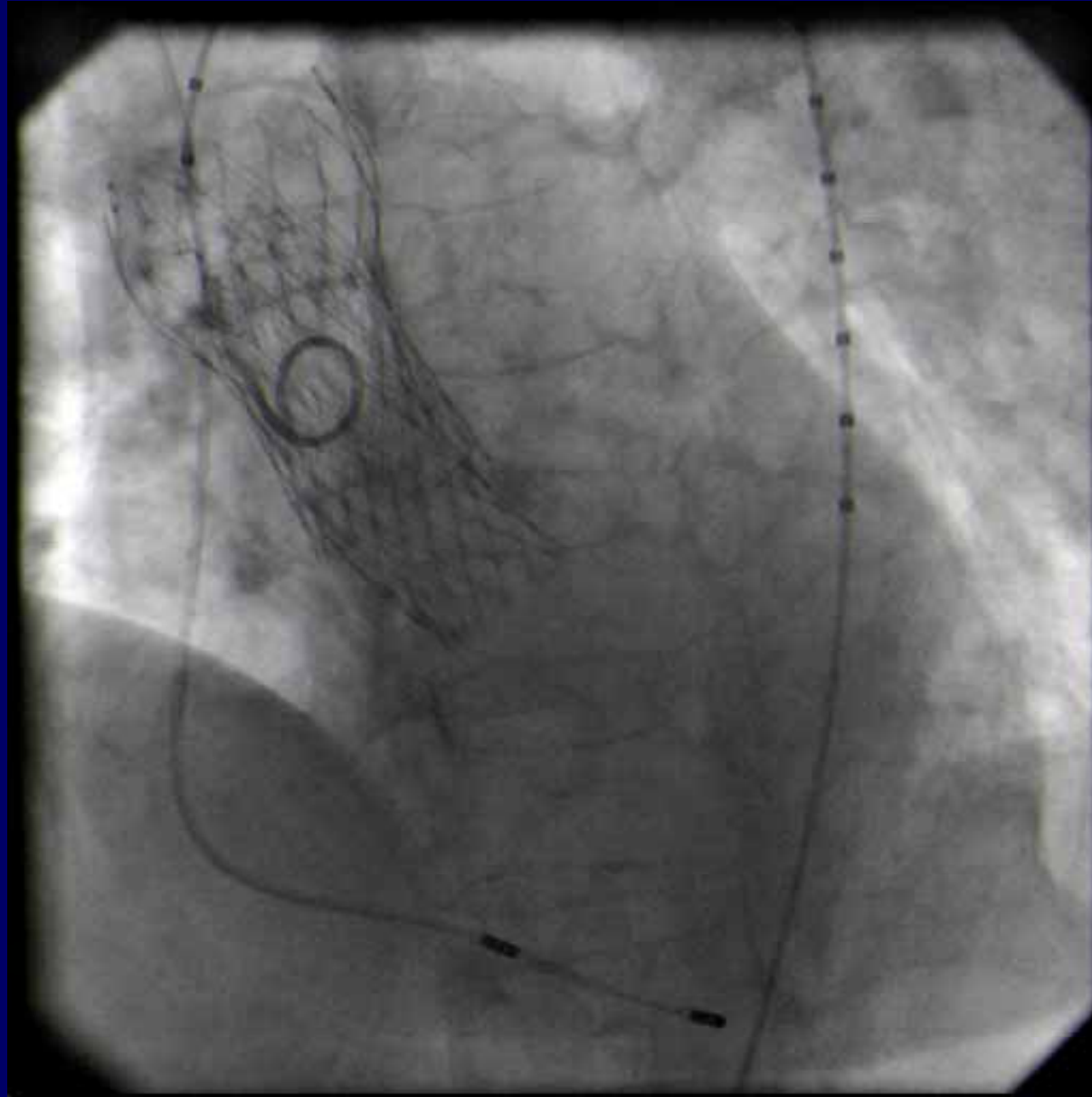
















# HK Experience

- 32 CoreValve cases (no Edwards valve yet)
  - QEH 17, HK Adventist 5, PWH 10
- **QEH Registry** - 17 CoreValve patients (since 6 Dec 2010):
  - 9 males and 8 females
  - Mean age  $80.41 \pm 3.06$  years
  - 2 bicuspid AV
  - Procedural success rate 100%
  - In-hospital mortality 0%
  - 30-day mortality 0%

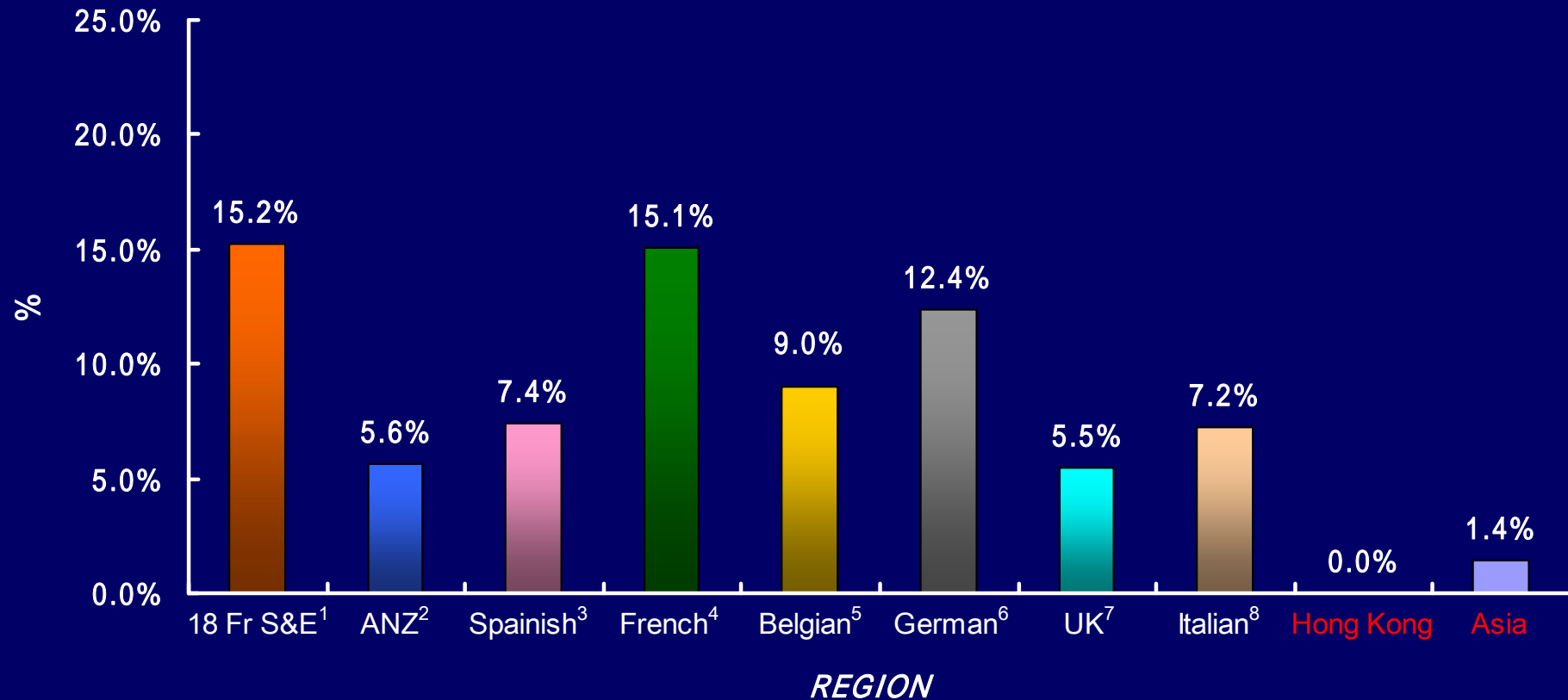


# QEH Registry

- 10 small CoreValve devices (26mm), 6 medium (29mm) and 1 large (31mm)
- 1 subclavian vascular complication treated with stent graft
- No iliac/femoral vascular complication
- All femoral wounds closed with Prostar/Proglide x 2
- One patient has PCI to LAD done before TAVI, returned for NSTEMI and with redo-PCI done, died 3 months after TAVI because of acute coronary stent thrombosis
- All 17 patients have functionally normal CoreValve with trivial to mild AR



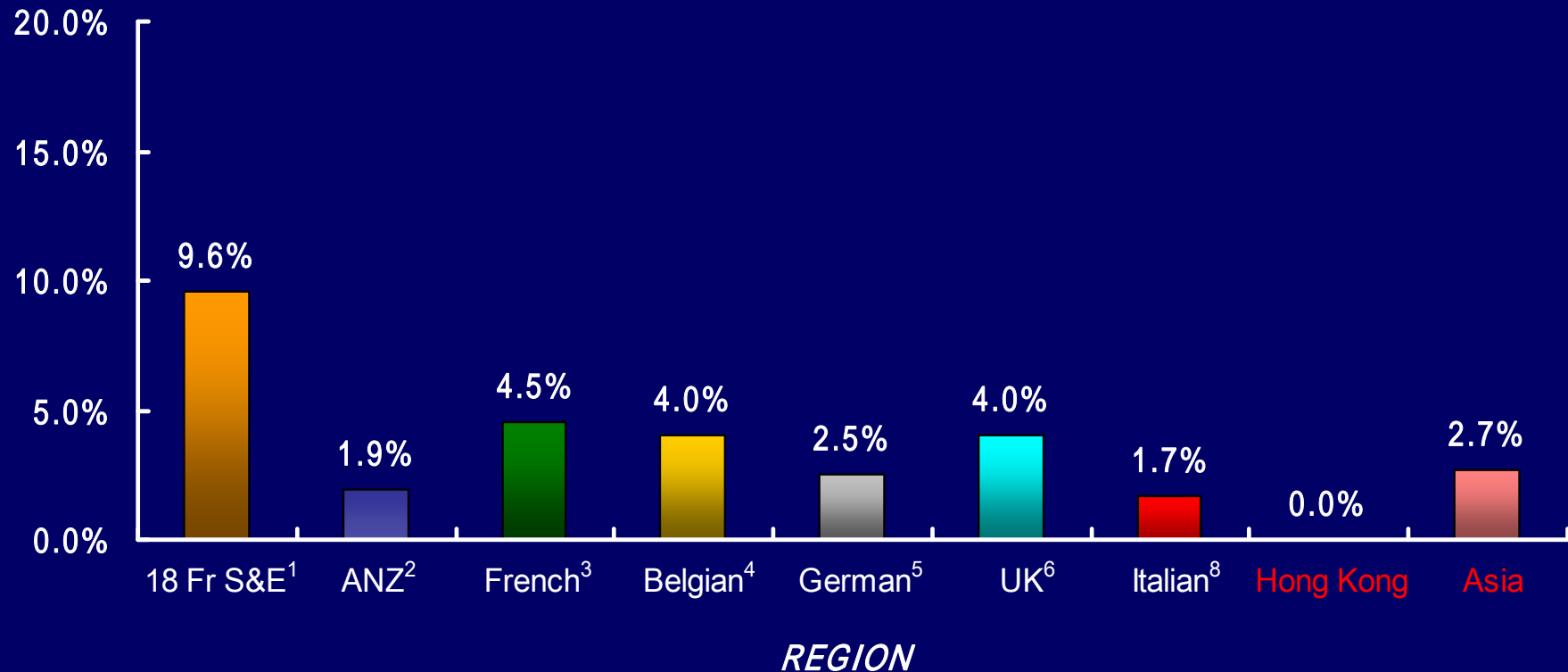
# 30-Day All-Cause Mortality



1. Medtronic Data on File. COR 2006-02: 18 Fr Safety & Efficacy Study Re-Analysis, August 14, 2009.
2. Meredith. VARC-adjudicated Outcomes in Inoperable and High Risk AS Patients. TCT 2010, Washington, DC.
3. Avanzas P, Munoz-Garcia AJ, Segura J, et al. Percutaneous implantation of the CoreValve® self-expanding aortic valve prosthesis in patients with severe aortic stenosis: early experience in Spain. *Rev Esp Cardiol.* 2010;63:141-148.
4. Eltchaninoff. French Registry, TAVI Facts, Figures and National Registries. EuroPCR 2010, Paris, France.
5. Bosmans. Belgian Registry, TAVI Facts, Figures and National Registries. EuroPCR 2010, Paris, France.
6. Zahn. German Registry, TAVI Facts, Figures and National Registries. EuroPCR 2010, Paris, France.
7. Ludman. UK Registry, TAVI Facts, Figures and National Registries. EuroPCR 2010, Paris, France.
8. Petronio. Italian Registry, TAVI Facts, Figures and National Registries. EuroPCR 2010, Paris, France.



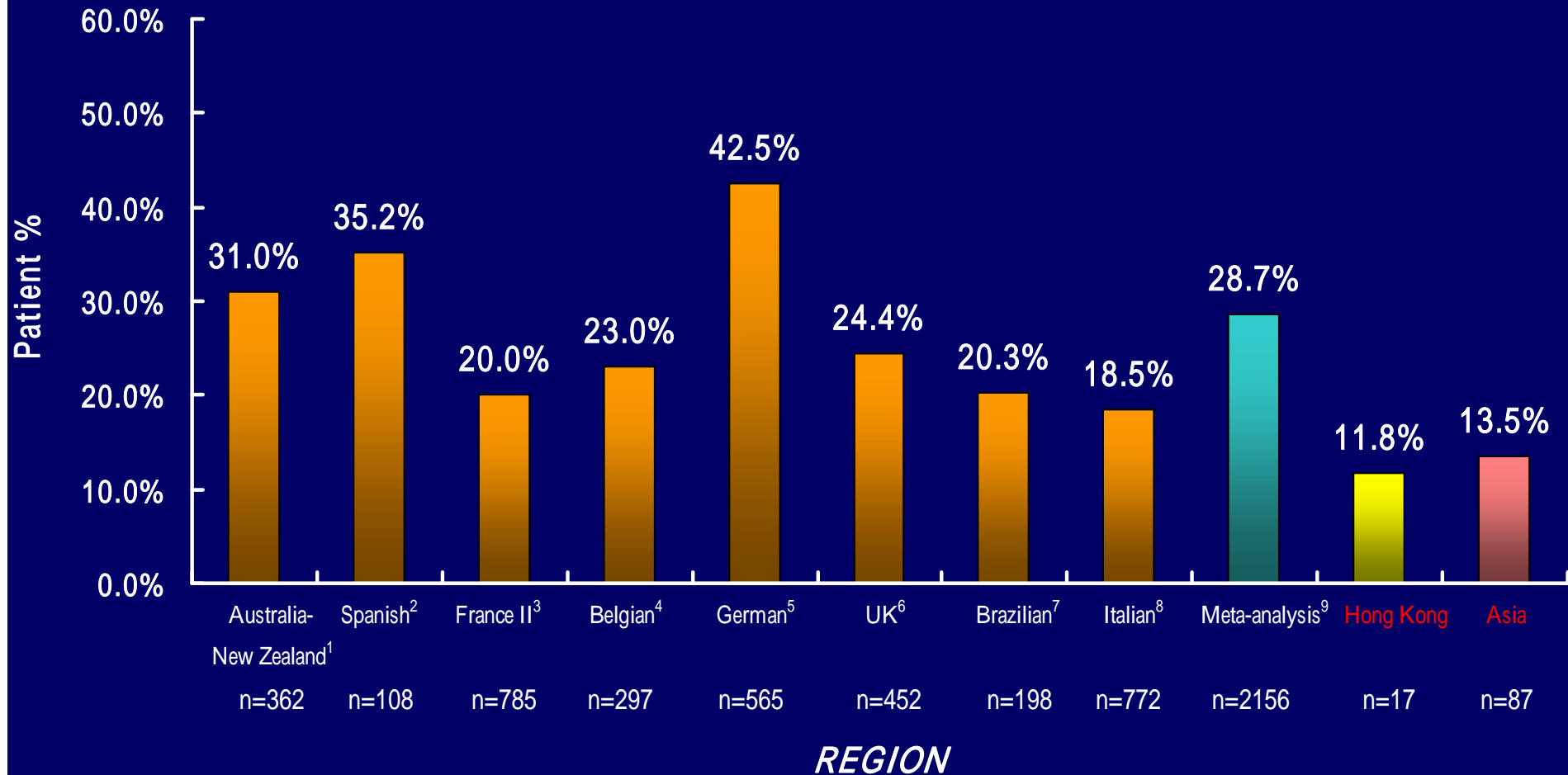
# 30-Day Stroke Rate



1. Medtronic. Data on file. COR 2006-02: 18 Fr Safety & Efficacy Study Re-Analysis, August 14, 2009.
2. Meredith. VARC-adjudicated Outcomes in Inoperable and High Risk AS Patients. TCT 2010, Washington, DC.
3. Eltchaninoff. French Registry, TAVI Facts, Figures and National Registries. EuroPCR 2010, Paris, France.
4. Bosmans. Belgian Registry, TAVI Facts, Figures and National Registries. EuroPCR 2010, Paris, France.
5. Zahn. German Registry, TAVI Facts, Figures and National Registries. EuroPCR 2010, Paris, France.
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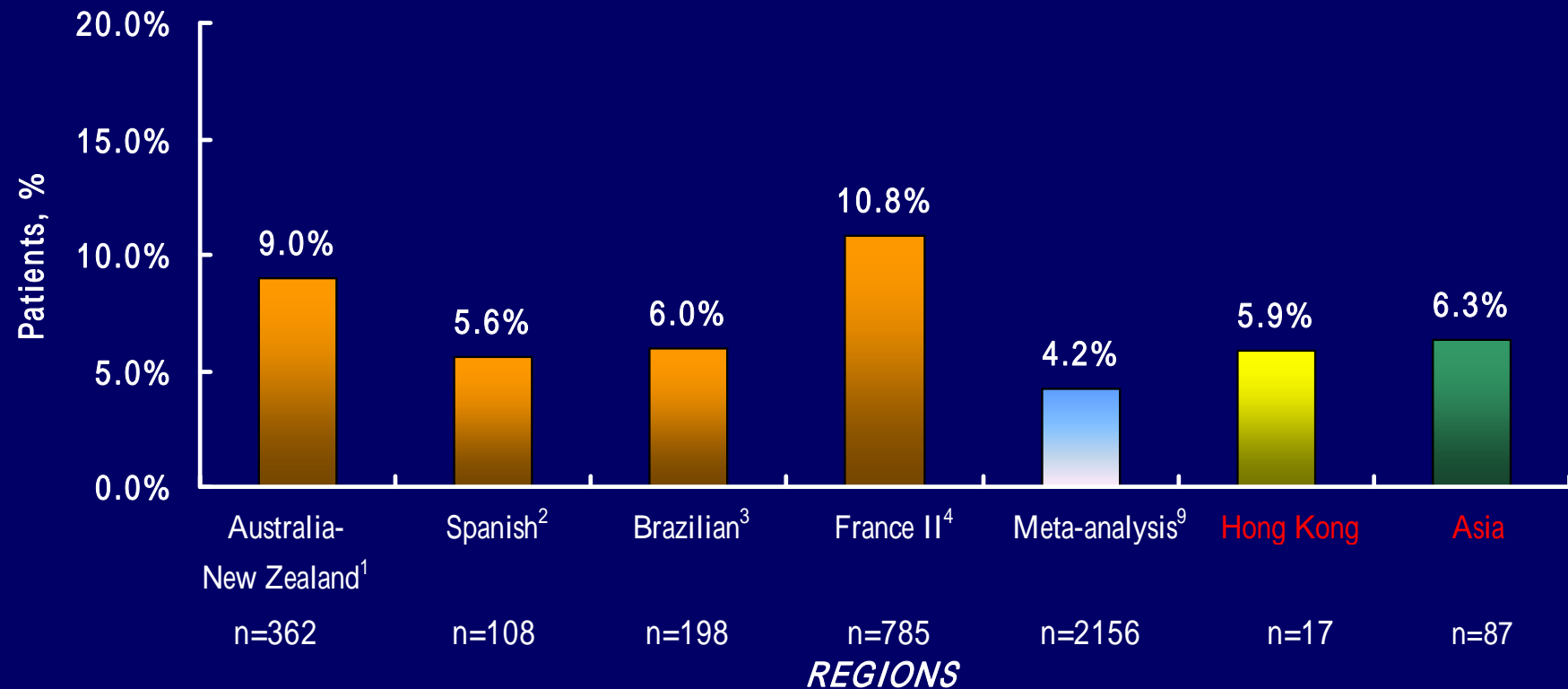


# Pacemaker Implantation Rates Across Studies



1. Meredith I.T. 12 Month Results from ANZ CoreValve TAV Study. Presented at: TCT 2011. 2. Avanzas P, et al. *Rev Esp Cardiol.* 2010;63:141-148. 3. Cribier A. FRANCE II Multicenter TAVR Registry. Presented at: TCT 2011. 4. Bosmans J. Belgian TAVI Registry. Presented at: London Valves 2011. 5. Zahn R., et al. *European Heart Journal.* 2011; 32:198-204. 6. Moat N.E., et al. *JACC.* 2011;58. 7. Brito F.S. Brazilian Registry. Presented at TCT 2011. 8. Petronio AS. Italian Registry. Presented at: EuroPCR 2010. 9. Ruiz C.E. Weighted meta-analysis of CoreValve® Outcomes. Presented at: EuroPCR 2011 (analysis sponsored by Medtronic, Inc.).

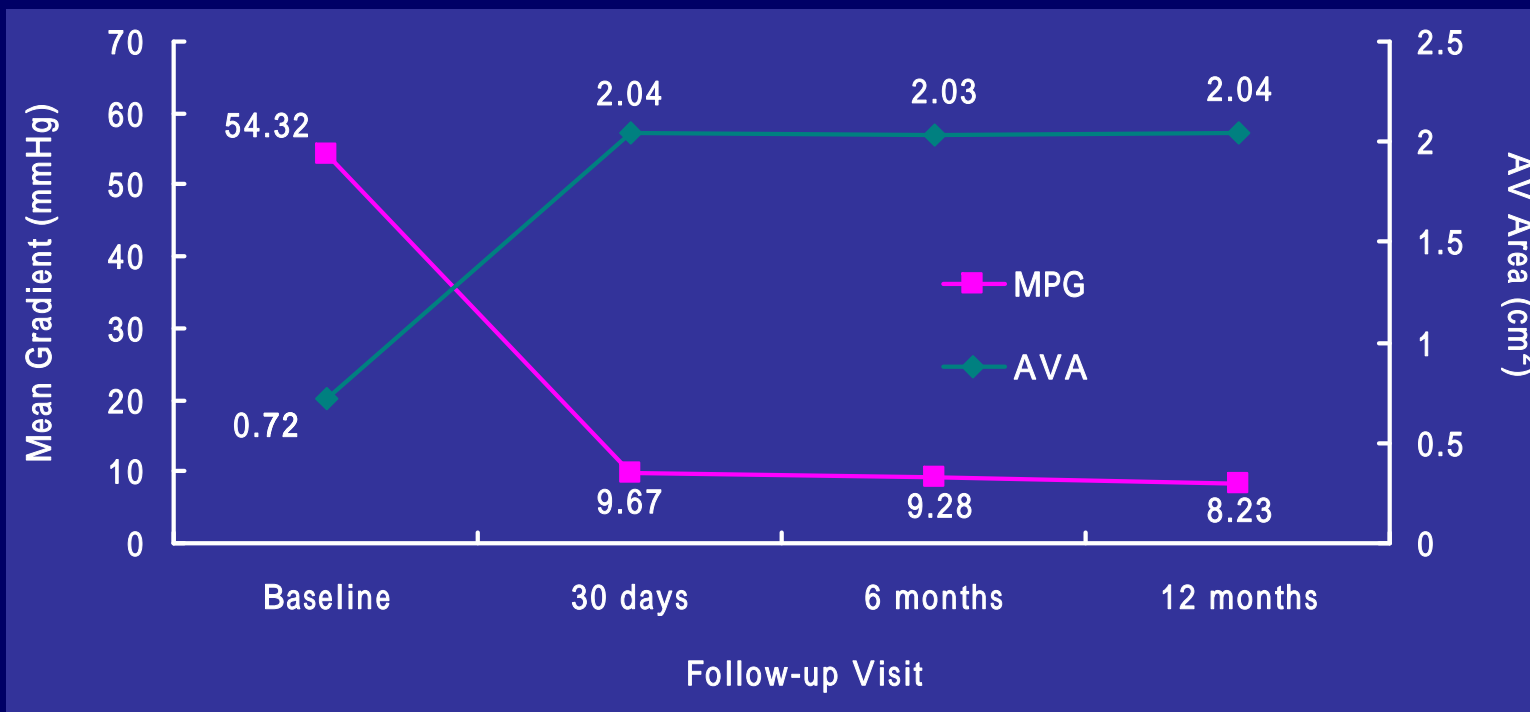
# Vascular Complications



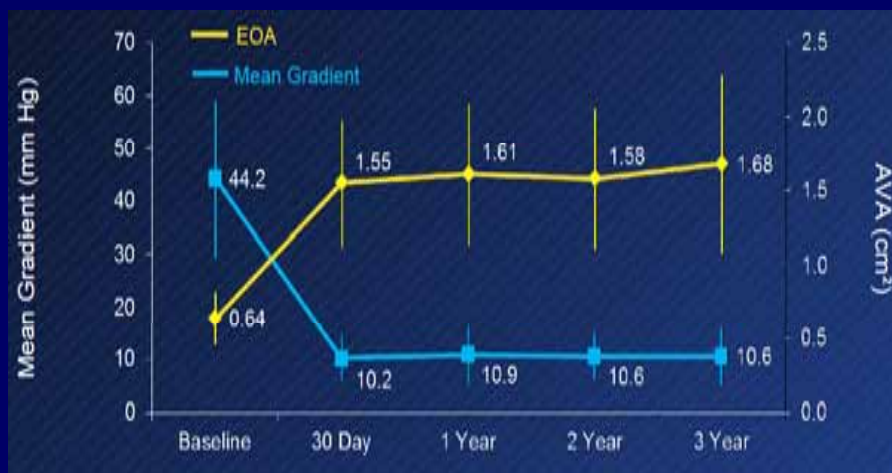
1. Meredith I.T. 12 Month Results from ANZ CoreValve TAV Study. Presented at: TCT 2011. 2. Avanzas P, et al. *Rev Esp Cardiol.* 2010;63:141-148. 3. Brito F.S. Brazilian Registry. Presented at TCT 2011. 4. Cribier A. FRANCE II Multicenter TAVR Registry. Presented at: TCT 2011. 5. Ruiz C.E. Weighted meta-analysis of CoreValve® Outcomes. Presented at: EuroPCR 2011 (analysis sponsored by Medtronic, Inc.).

# Mean Gradient & Valve Area

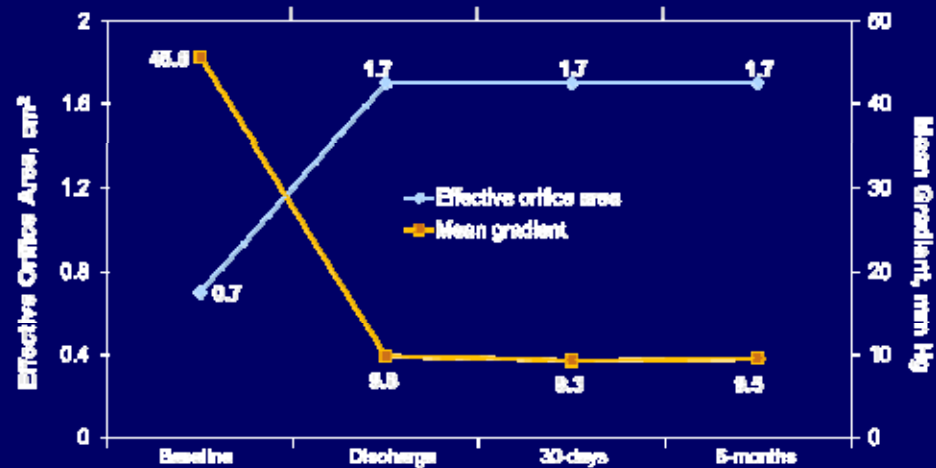
QEH  
Registry



## The PARTNER Trial

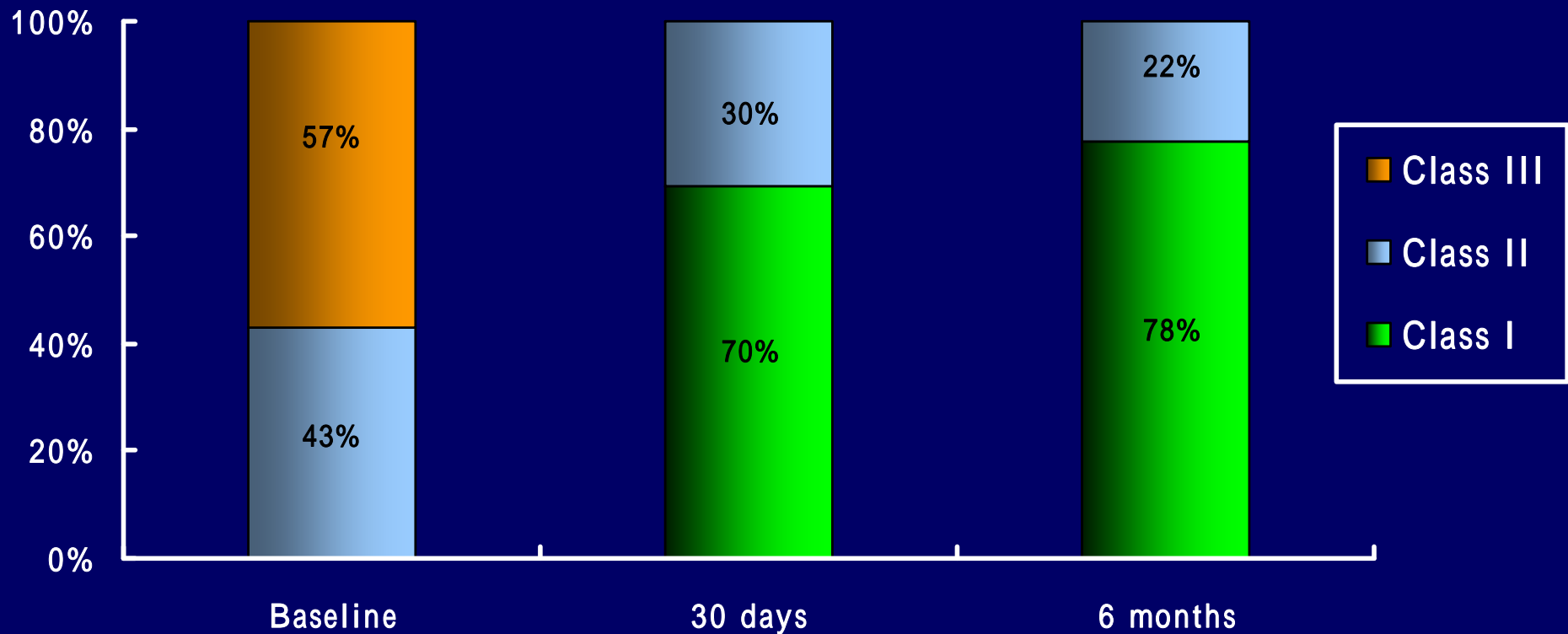


## CoreValve ADVANCE Study





# QEH | Symptom Status (NYHA Class)



# Food For Thoughts.....

Would you snare and pull back the first CoreValve to prevent coronary ostia occlusion?

Or would you just leave it there and implant the second valve?

