



Cardiogenic Shock: Lethal Combination

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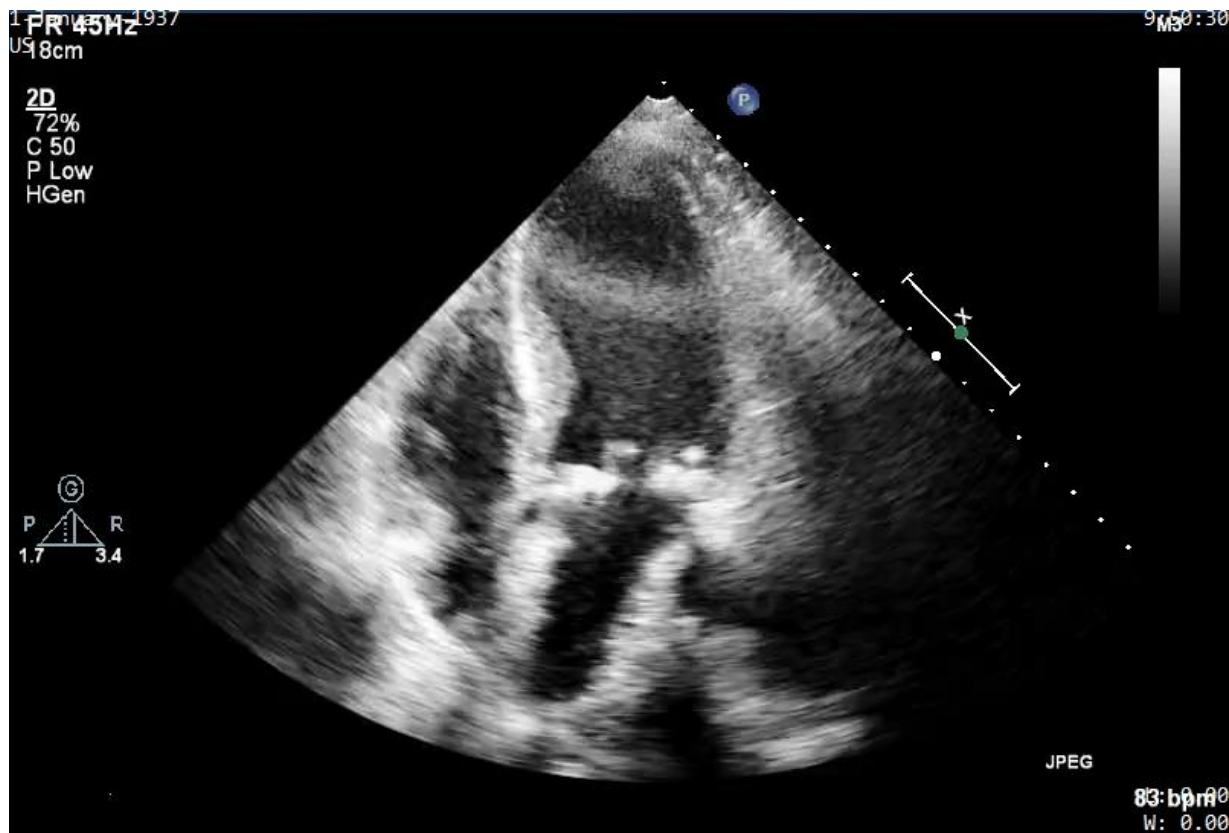
Hong Kong

Background

Summary

- 81-year-old lady
- Medical history
 - diabetes mellitus
 - hypertension
 - hyperlipidemia
- Admitted for acute coronary syndrome and acute pulmonary edema
- Inotropic dependent

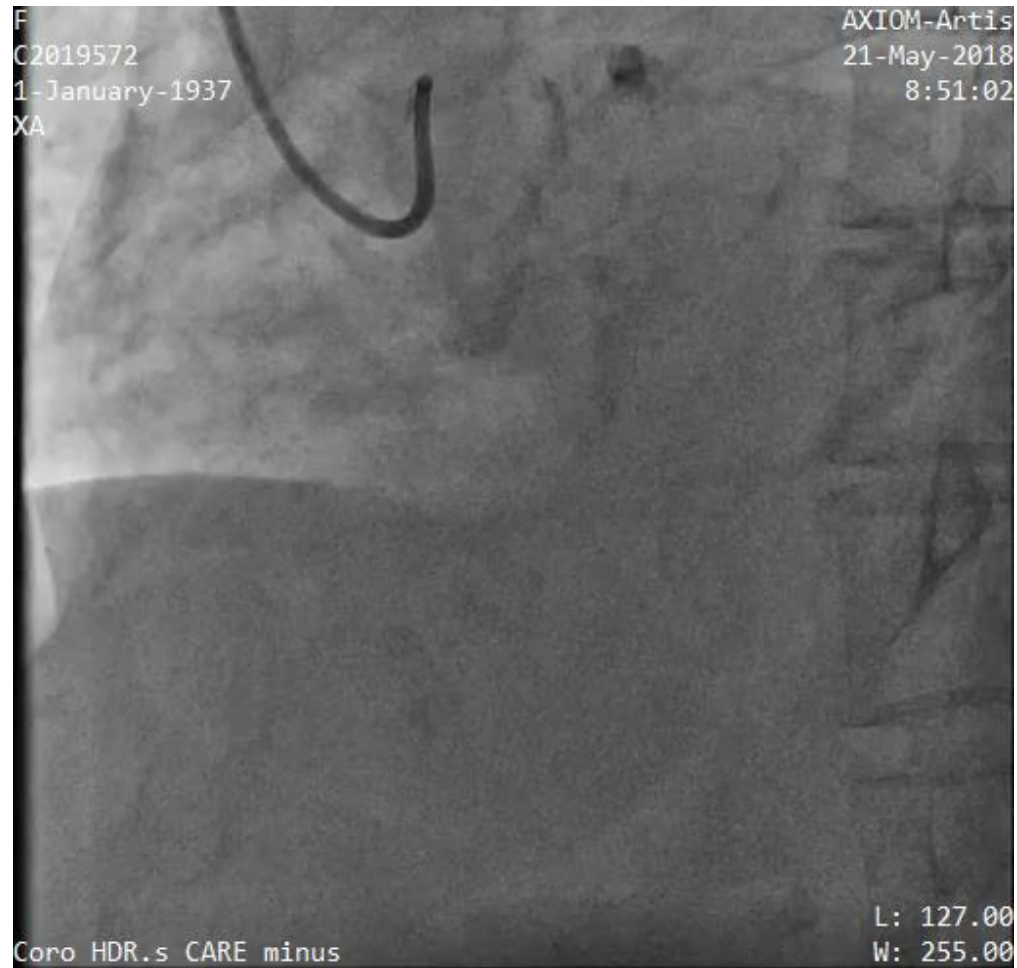
Baseline Echocardiogram



Baseline coronary angiogram



Baseline coronary angiogram



Reviewed in heart team

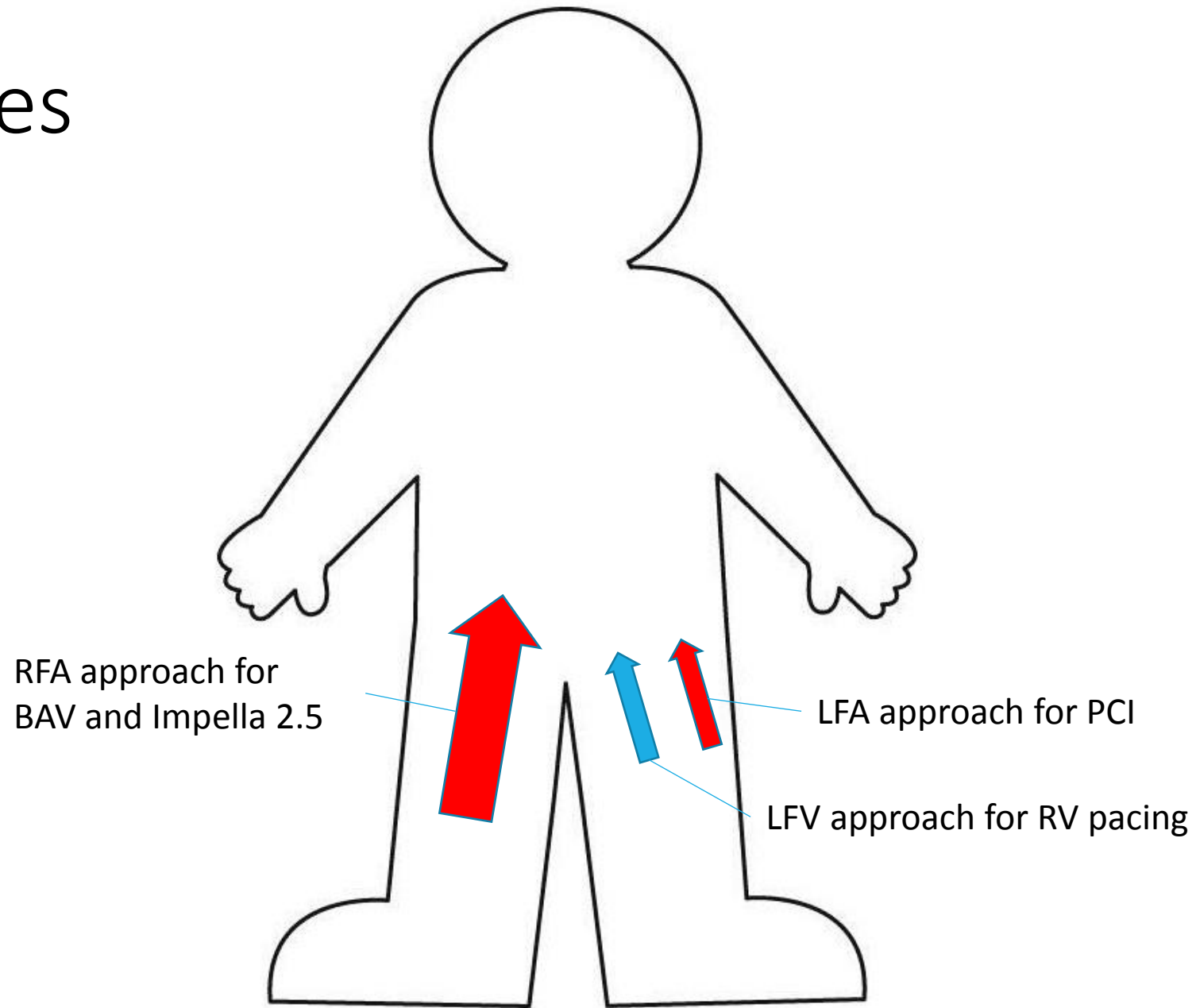
- Echocardiogram
 - impaired LVEF of 33%
 - severe aortic stenosis
- Coronary angiogram showed triple vessel disease
- Cardiogenic shock

- Inoperable for surgical aortic valve replacement and coronary artery bypass surgery

Plan

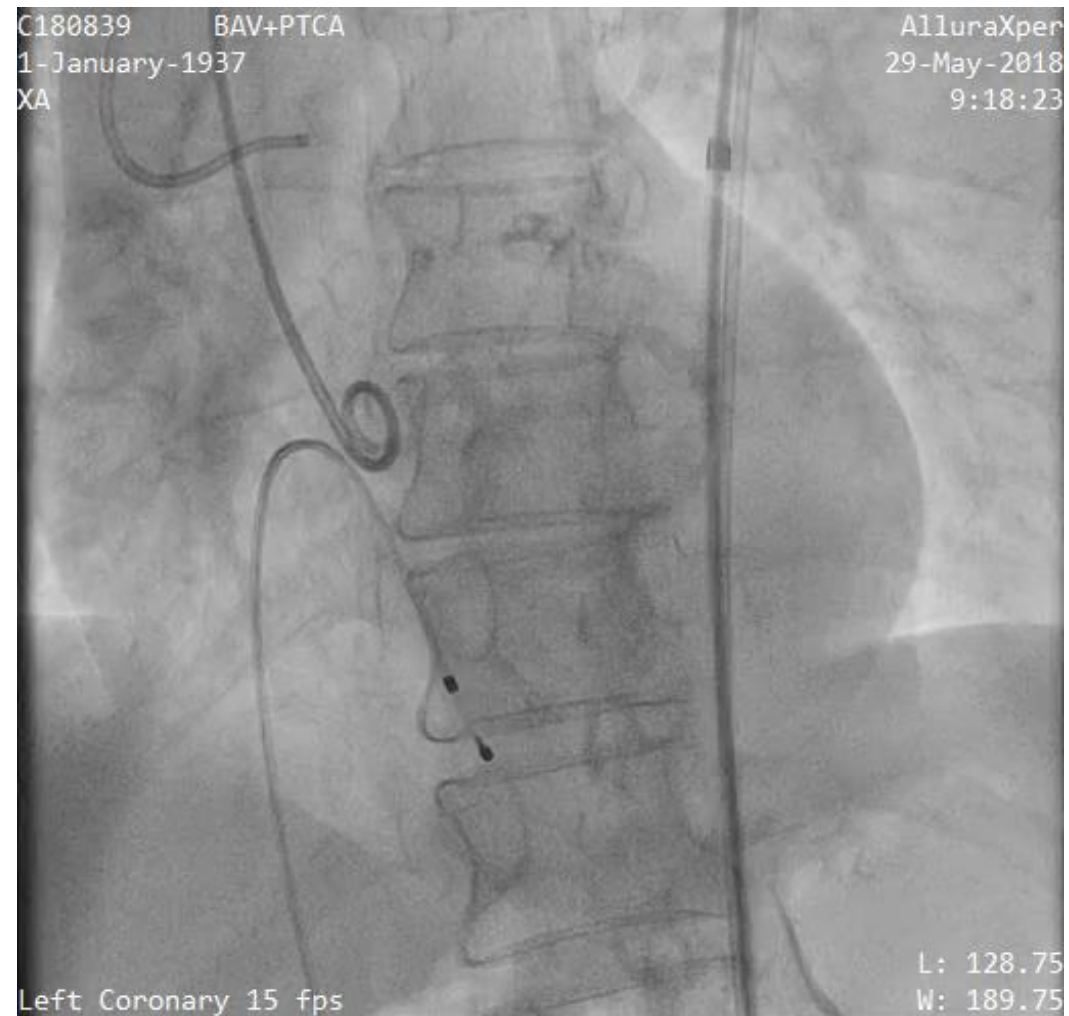
- Urgent BAV + Impella 2.5 support high risk PCI
- Staged TAVI

Strategies

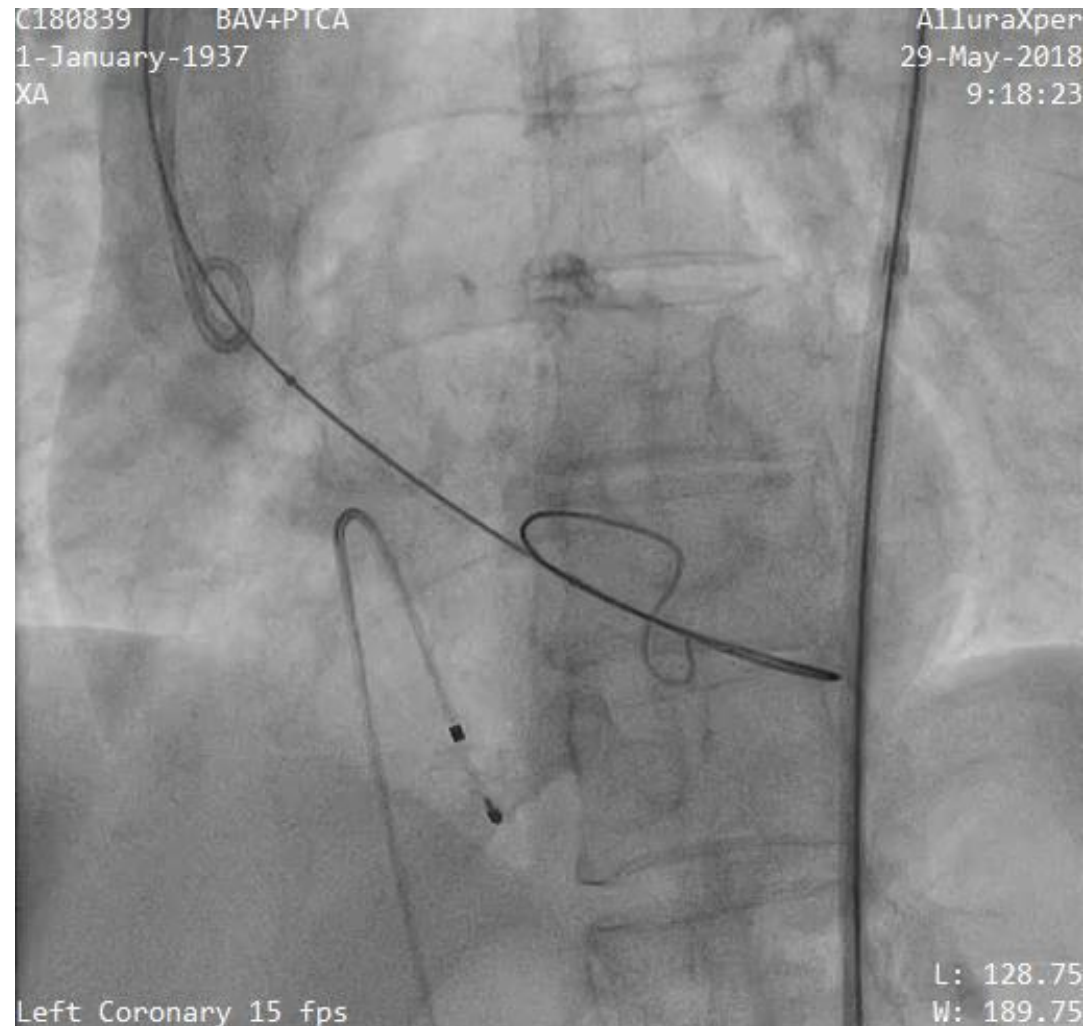


Procedure

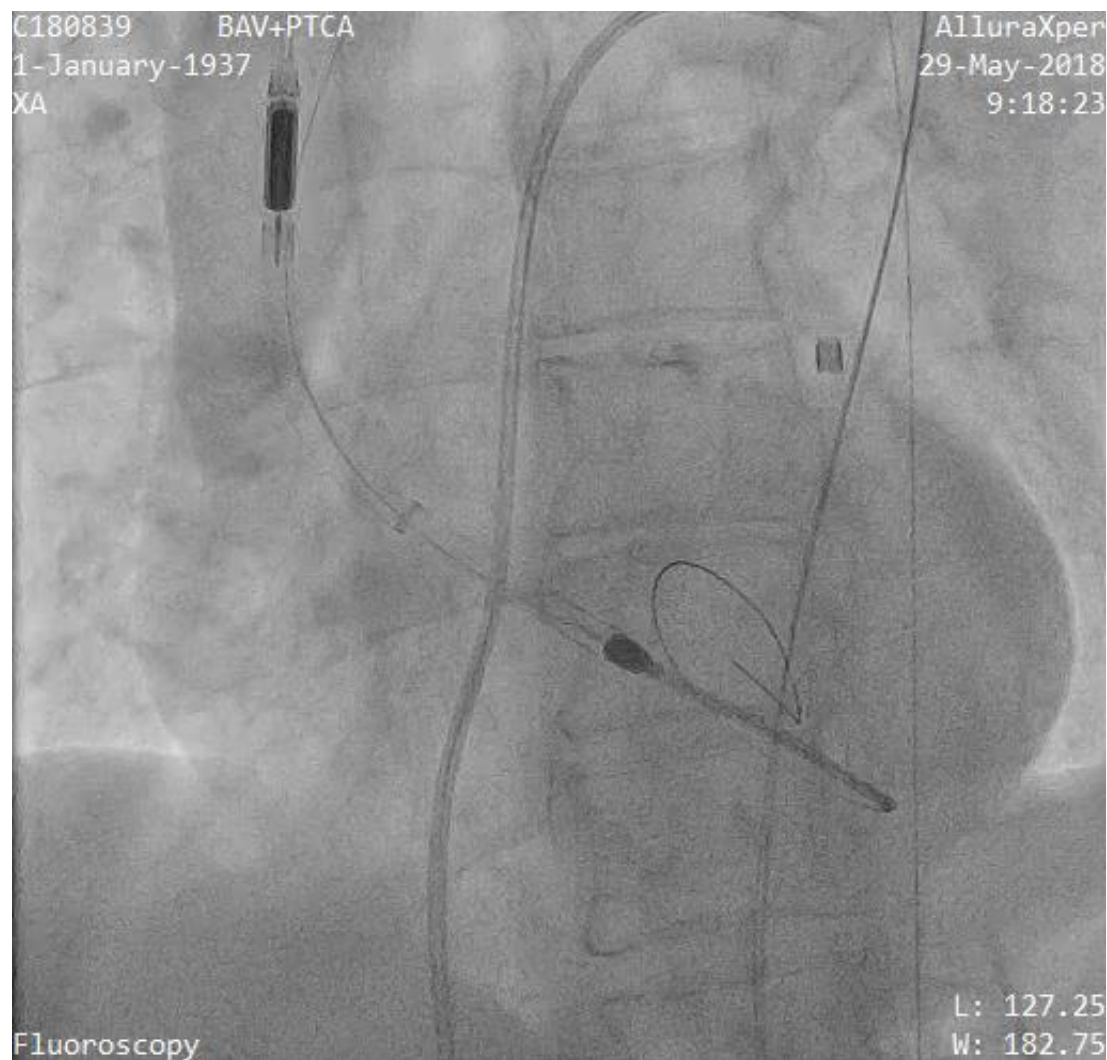
Baseline aortogram



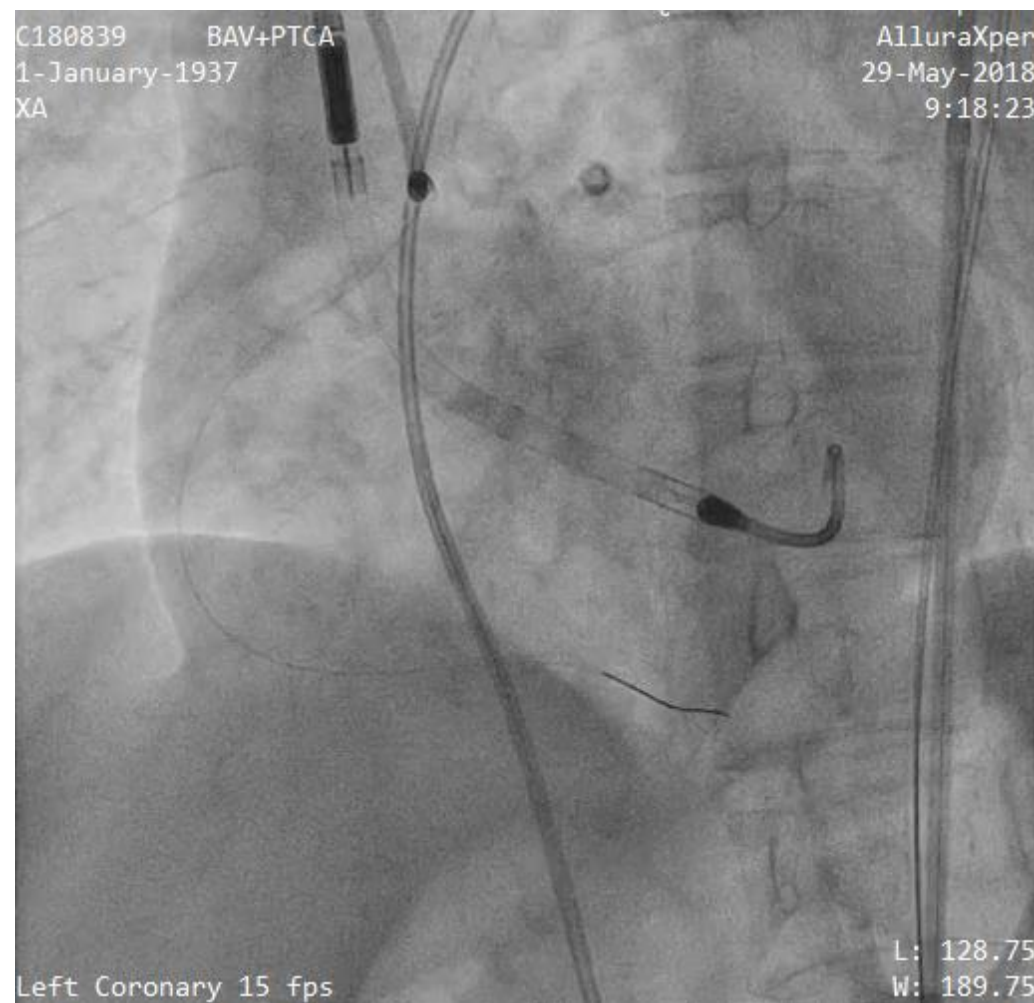
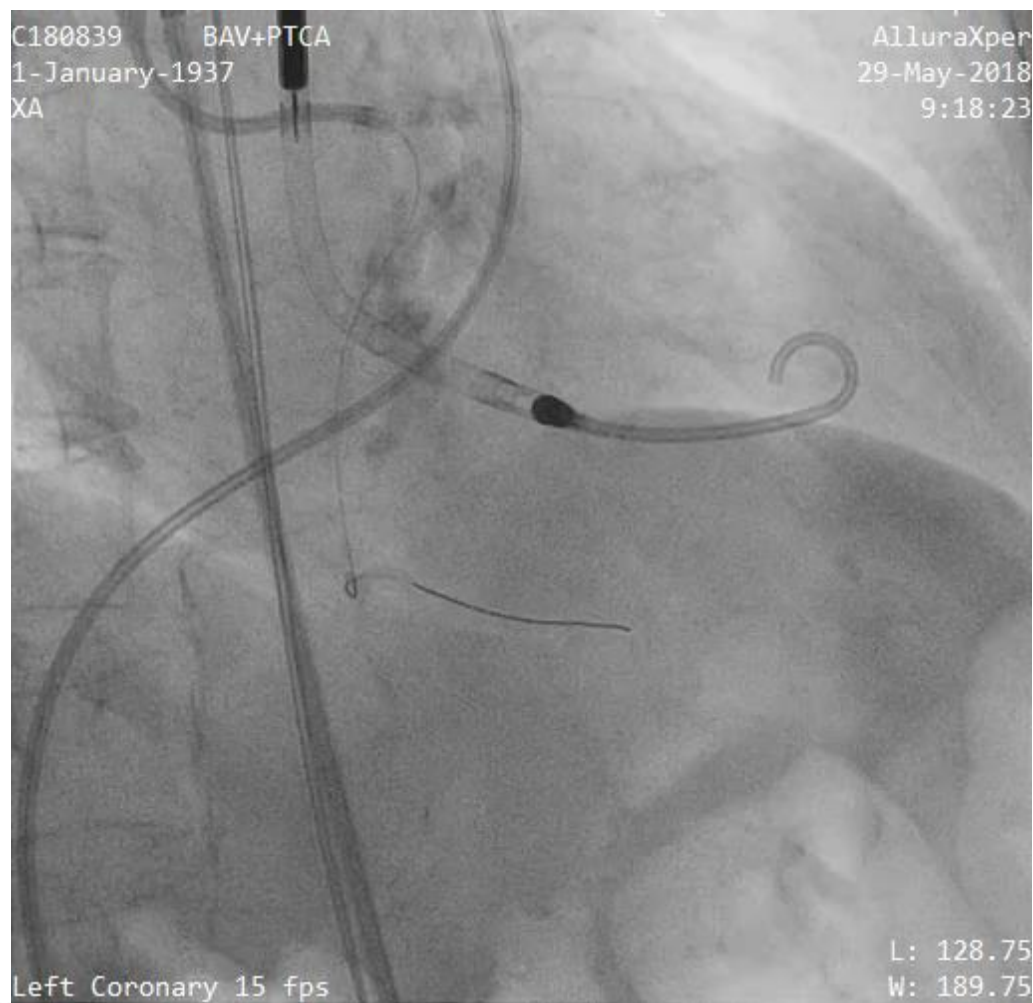
BAV with 18mm TRUE DILATATION Balloon under rapid right ventricular pacing



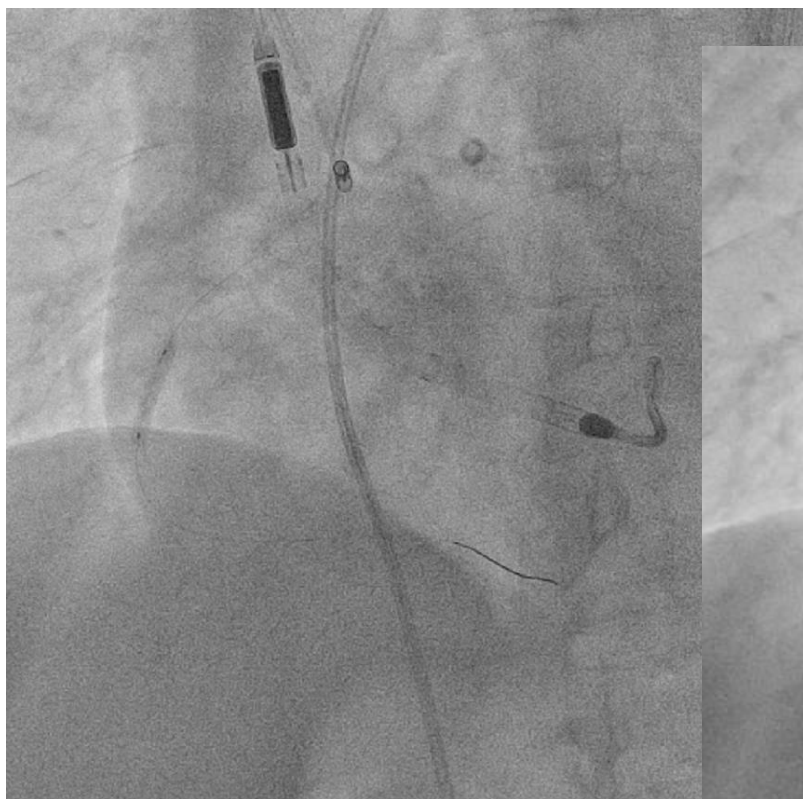
Impella 2.5 insertion after BAV



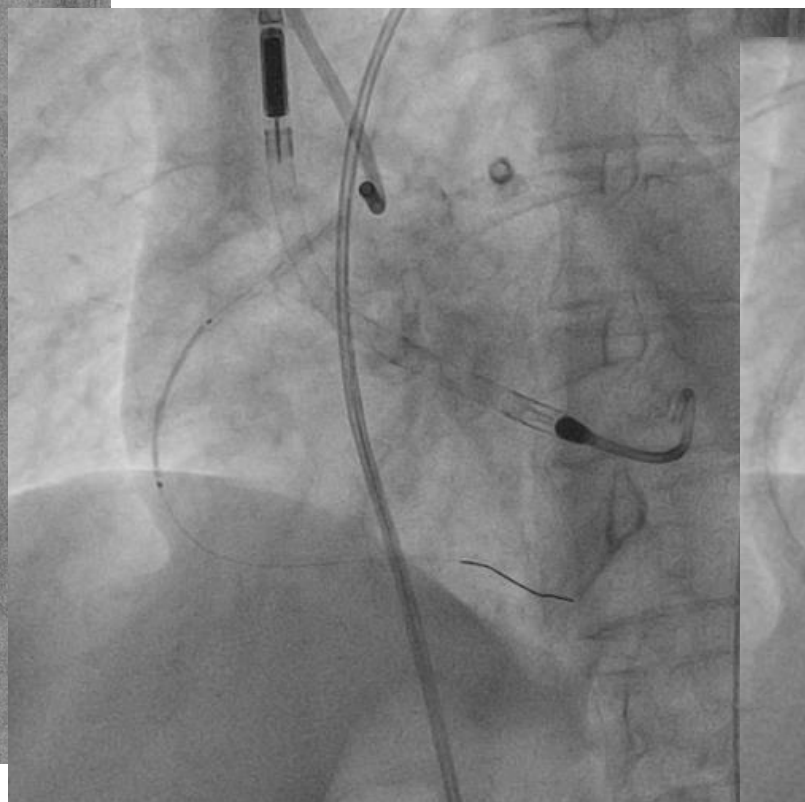
7Fr AL1 catheter



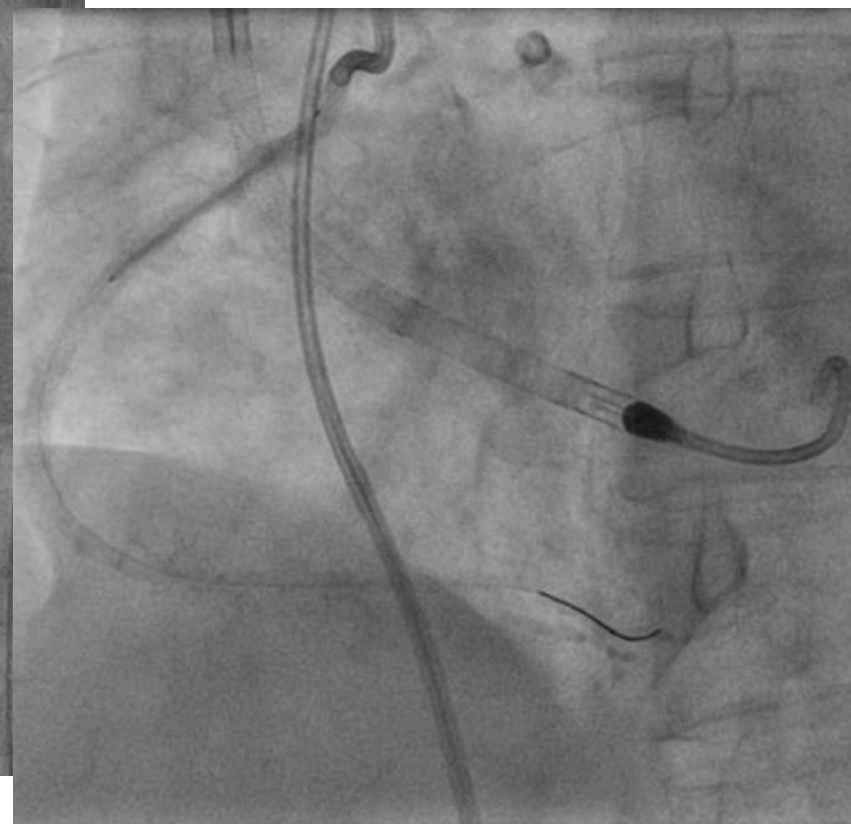
PCI to RCA



Predilate with NC balloon;
NSE alpha and angiosculpt

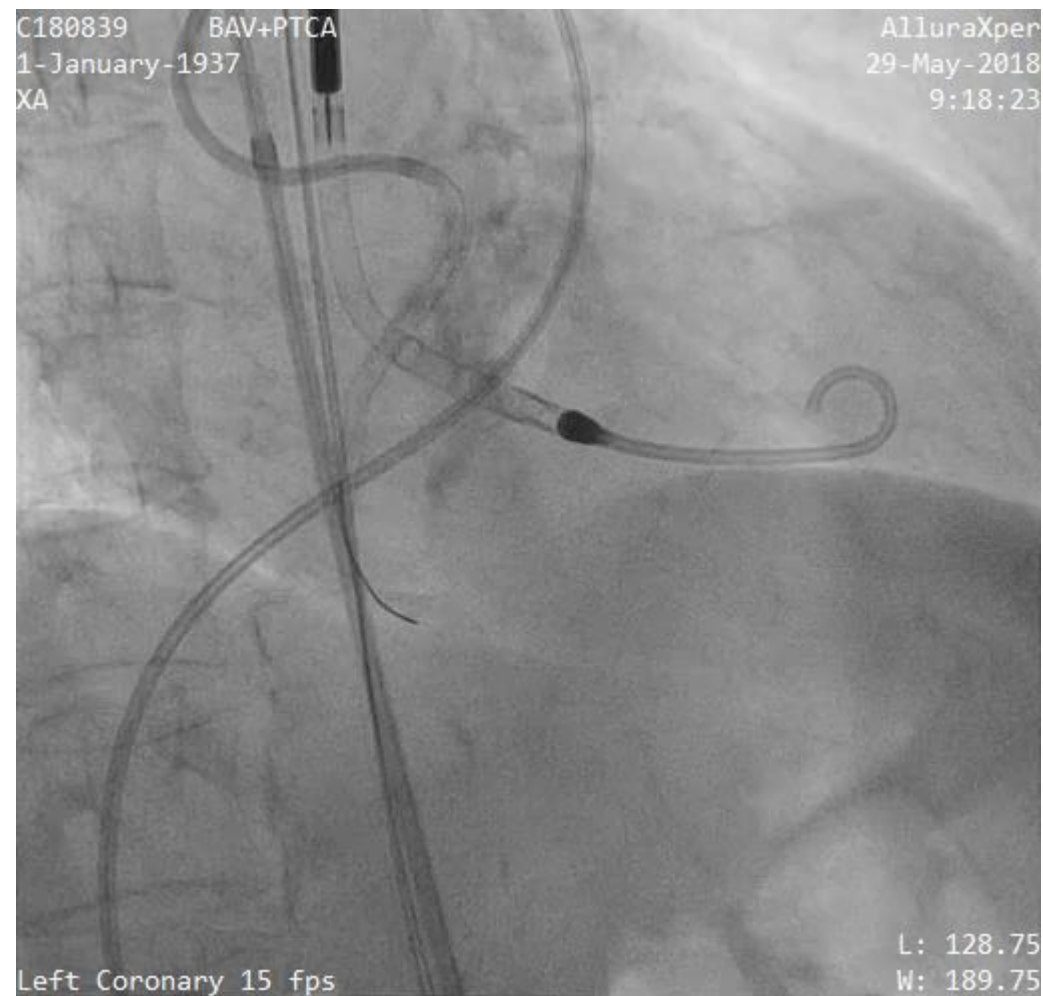
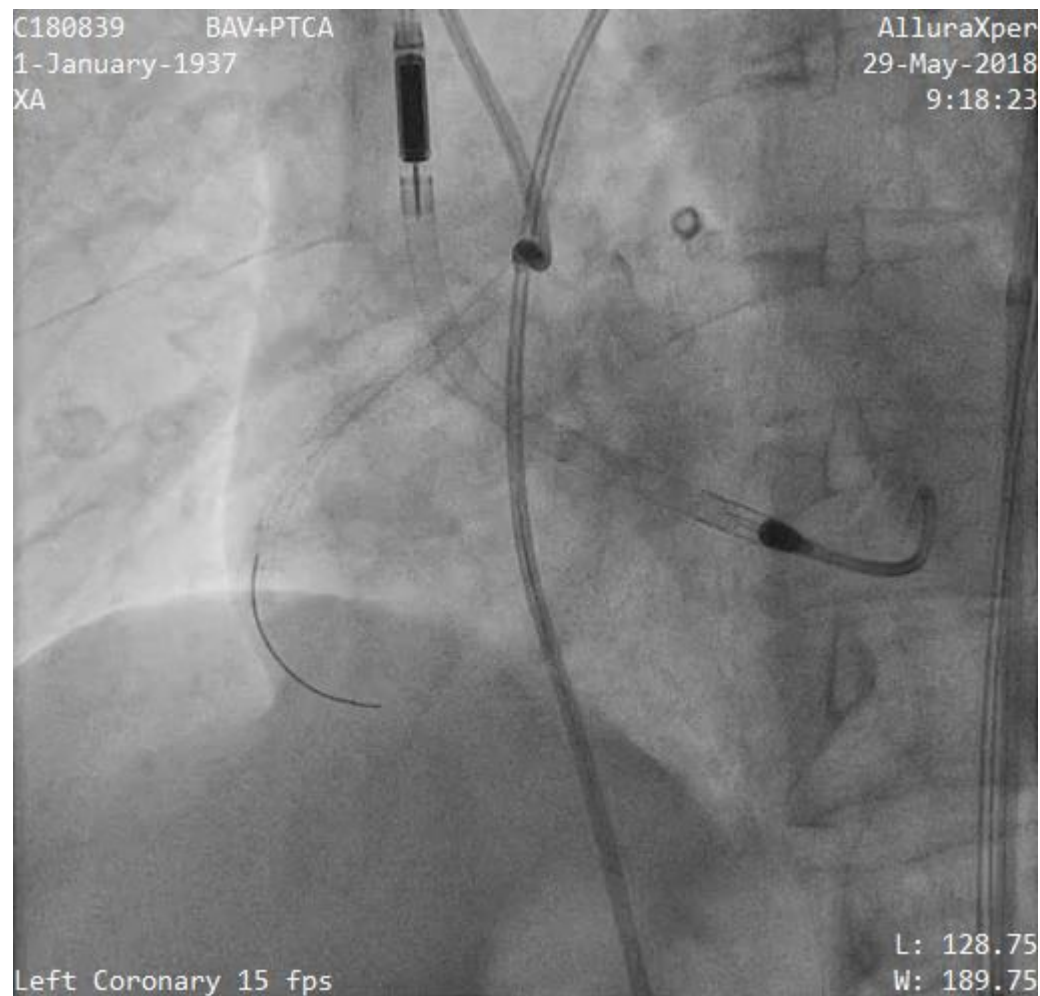


DES 3.0 x 26

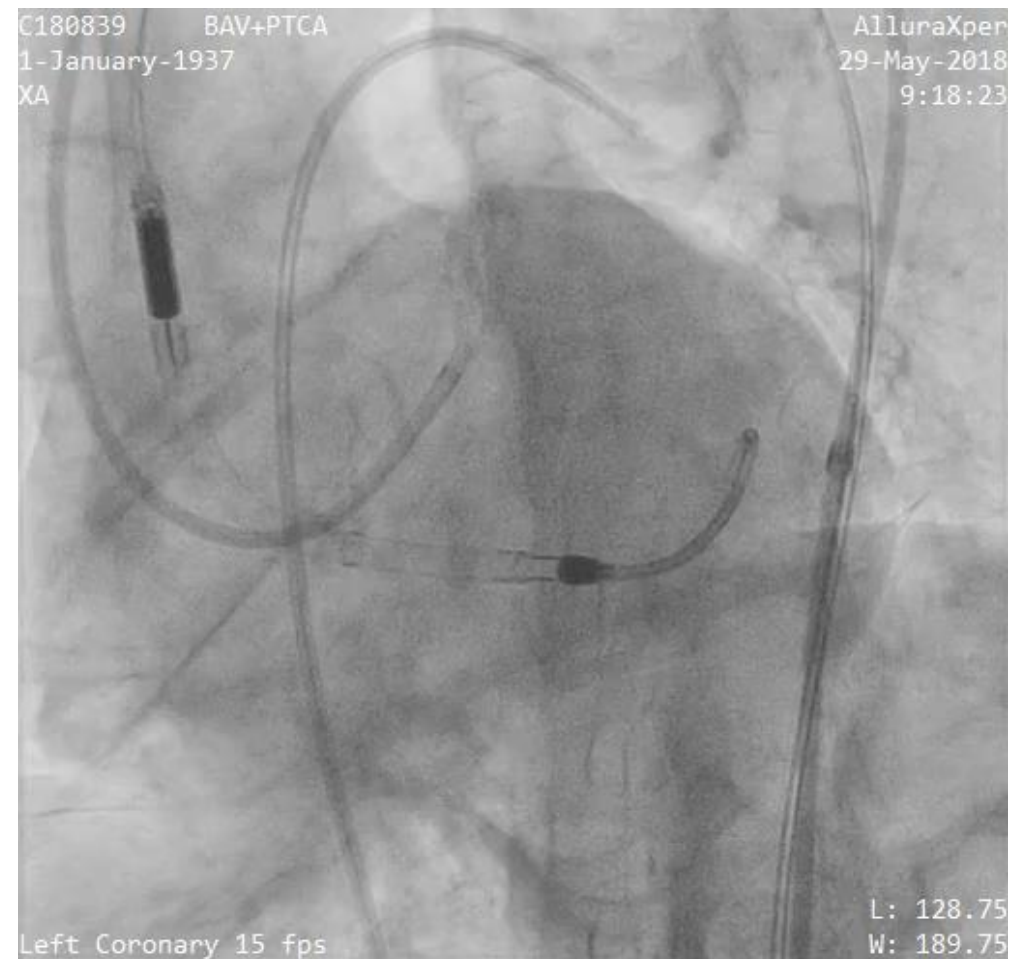
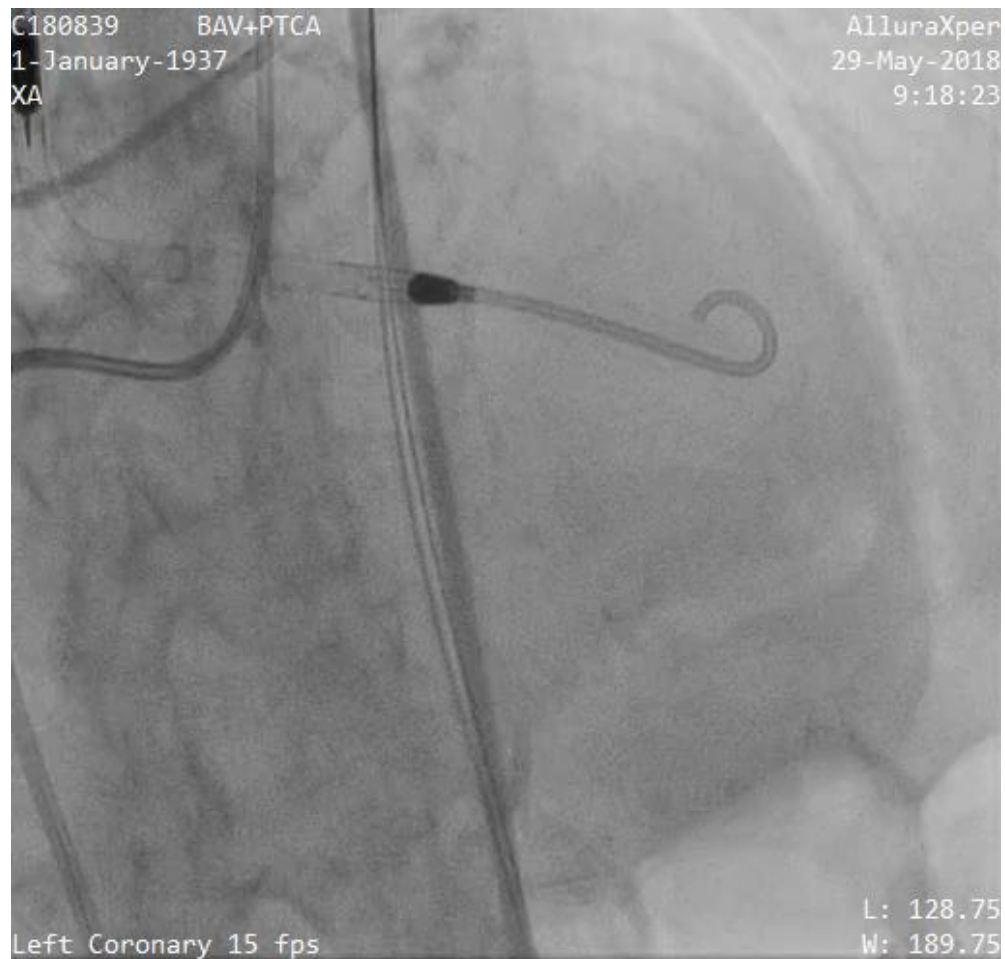


DES 3.5 x 30

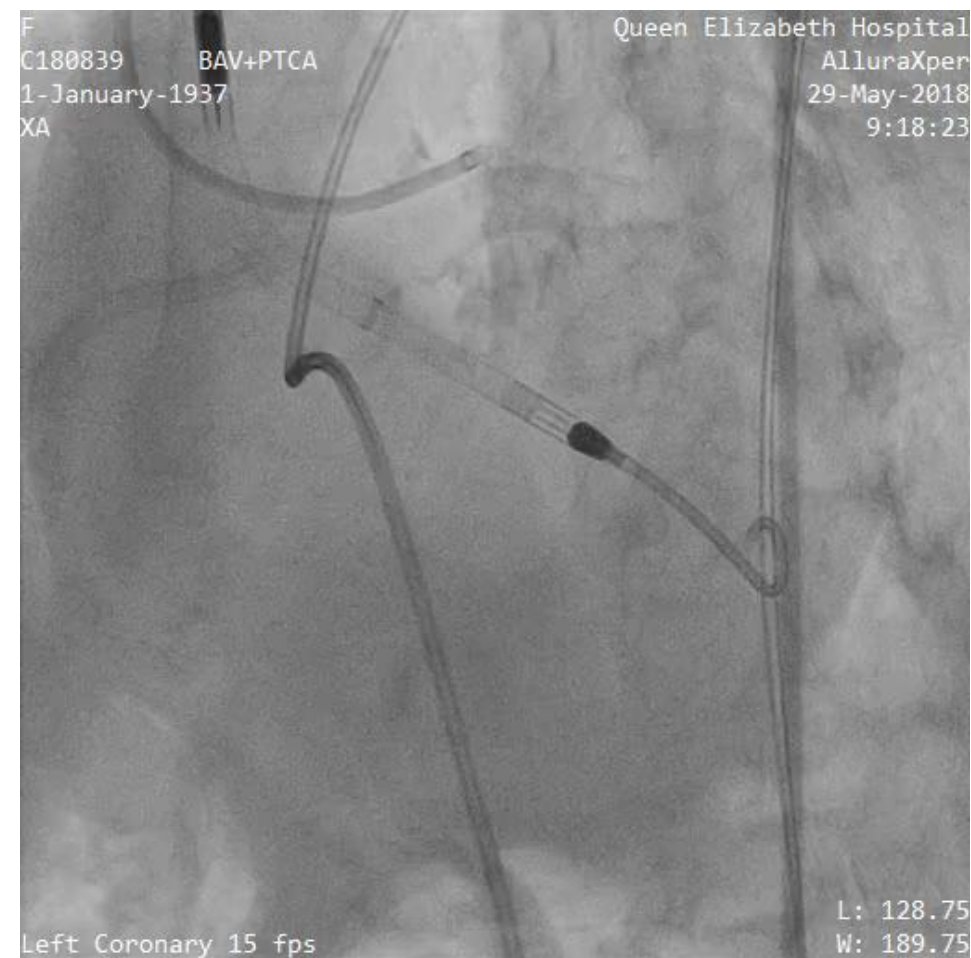
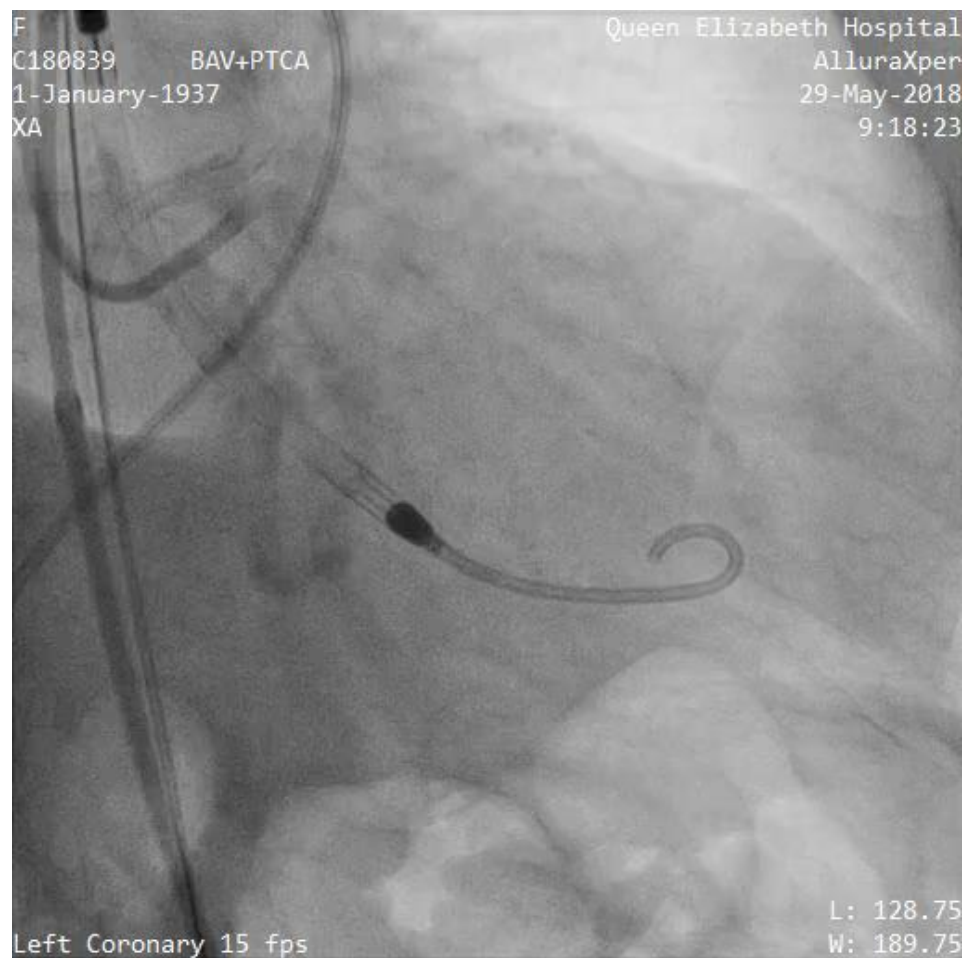
Finishing angiogram



7Fr EBU 3.75



7Fr EBU 3.75



PCI to LCX and LAD

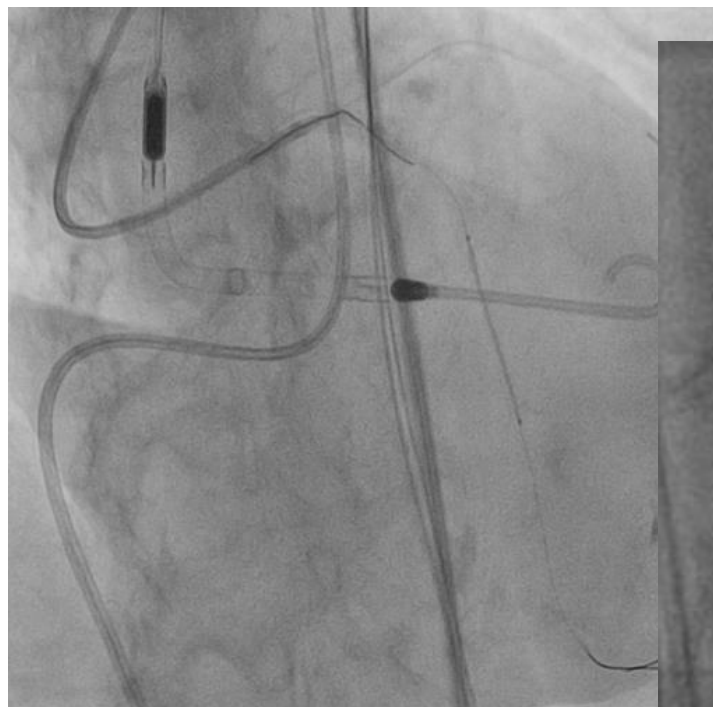


Rotablation with 1.75 blurr

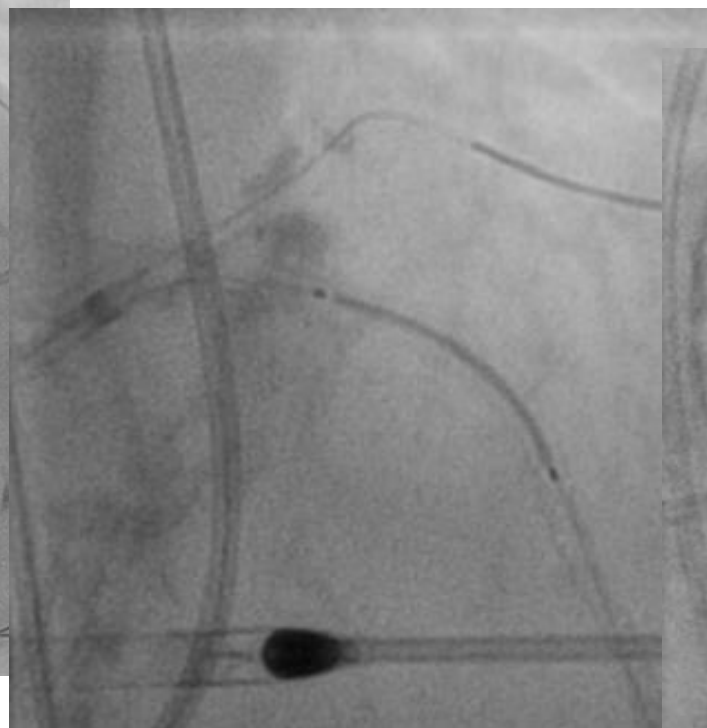


Rotablation with 1.75 blurr

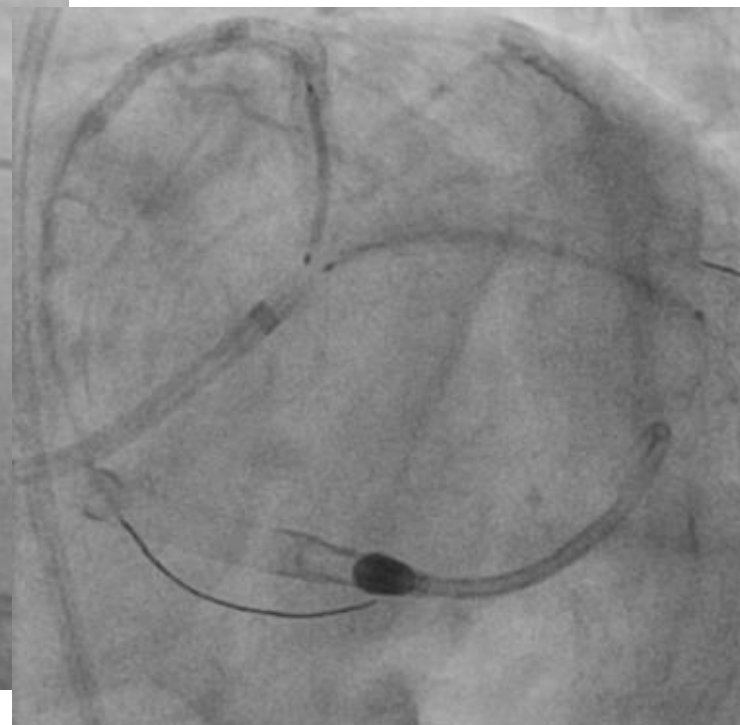
PCI to LCX and LAD



DES 2.25 x 30

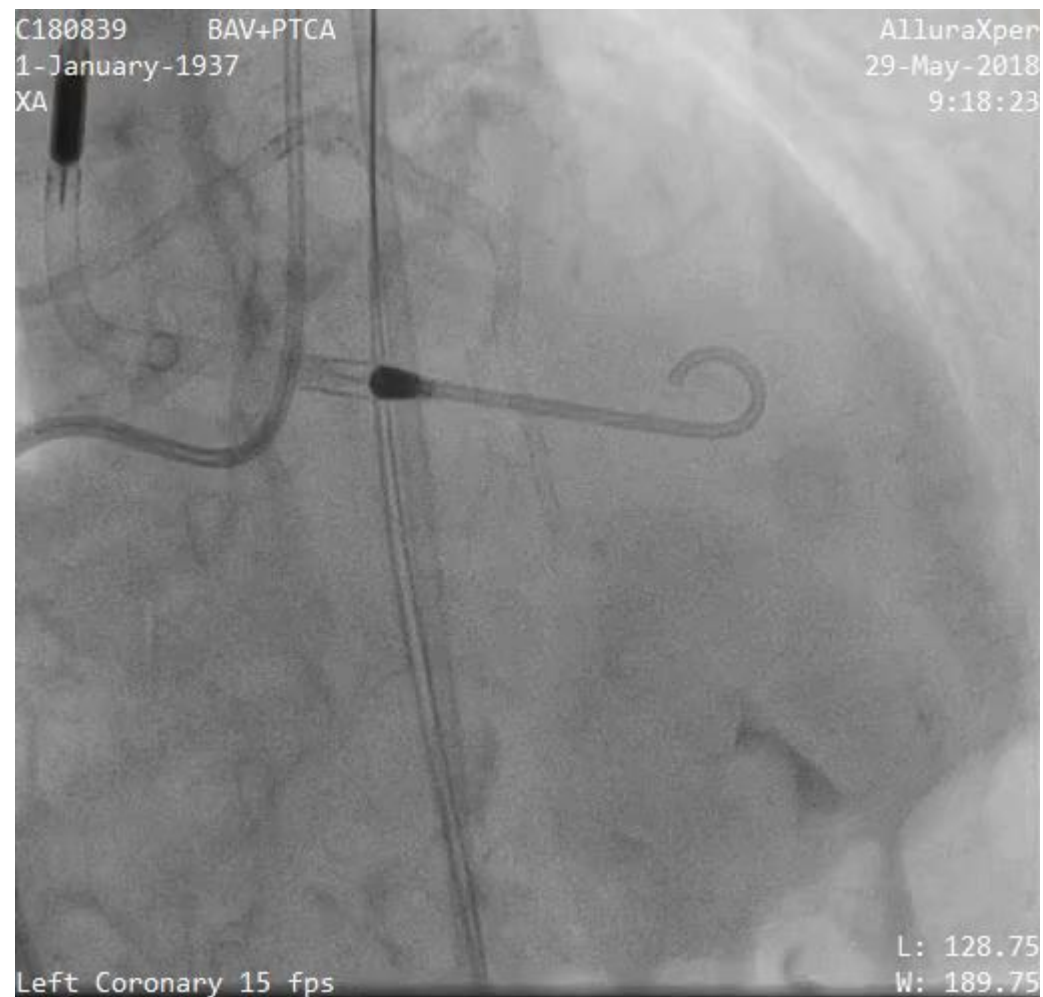
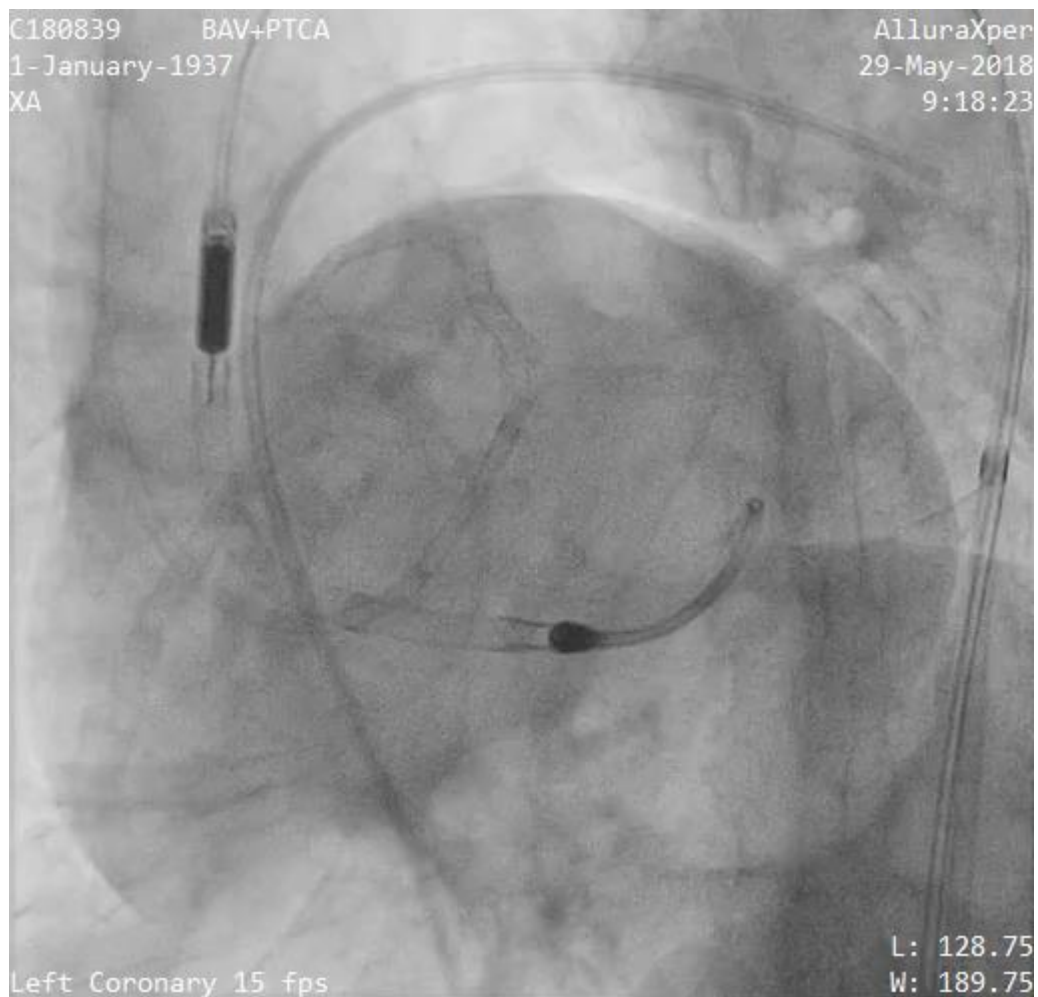


DES 2.75 x 22



DES 3.5 x 22 and 2.5 x 34
(simultaneous kissing stent)

Finishing angiogram



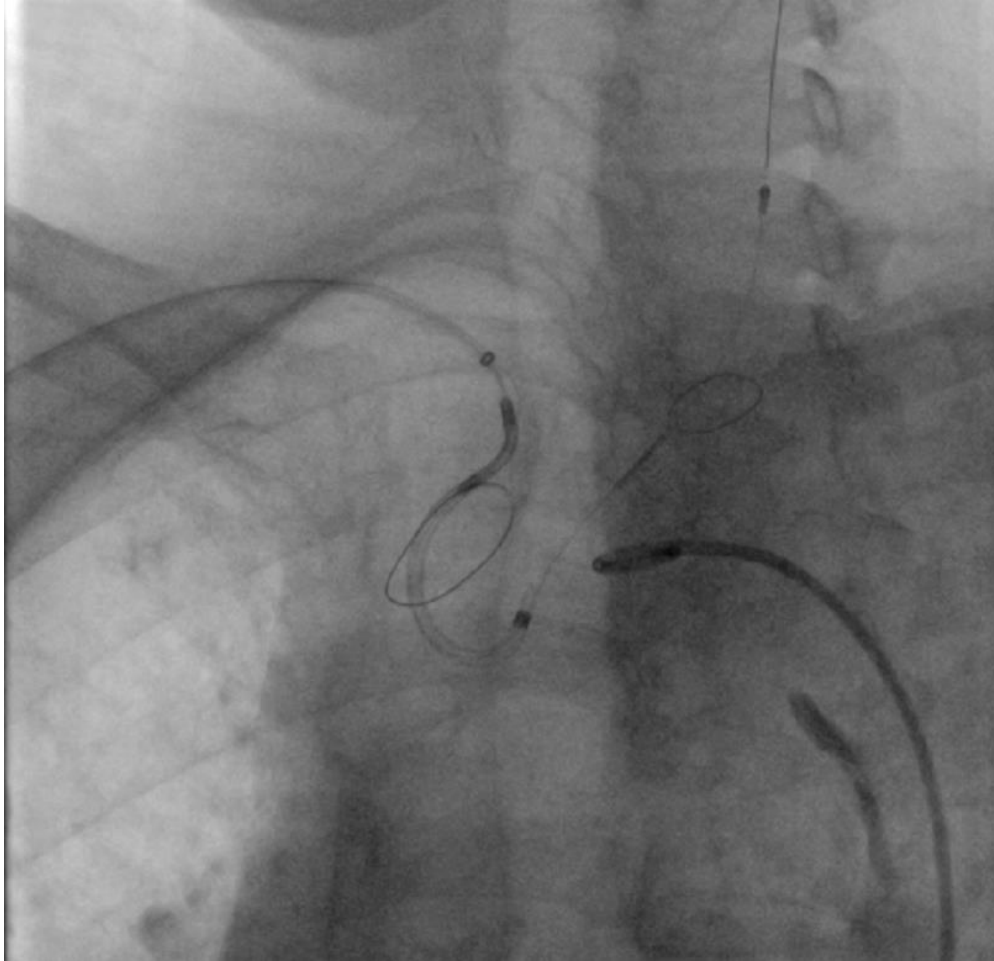
Impella removal on table



Progress

- Stabilized in CCU
- Gradually weaned off inotropes
- TAVI planning

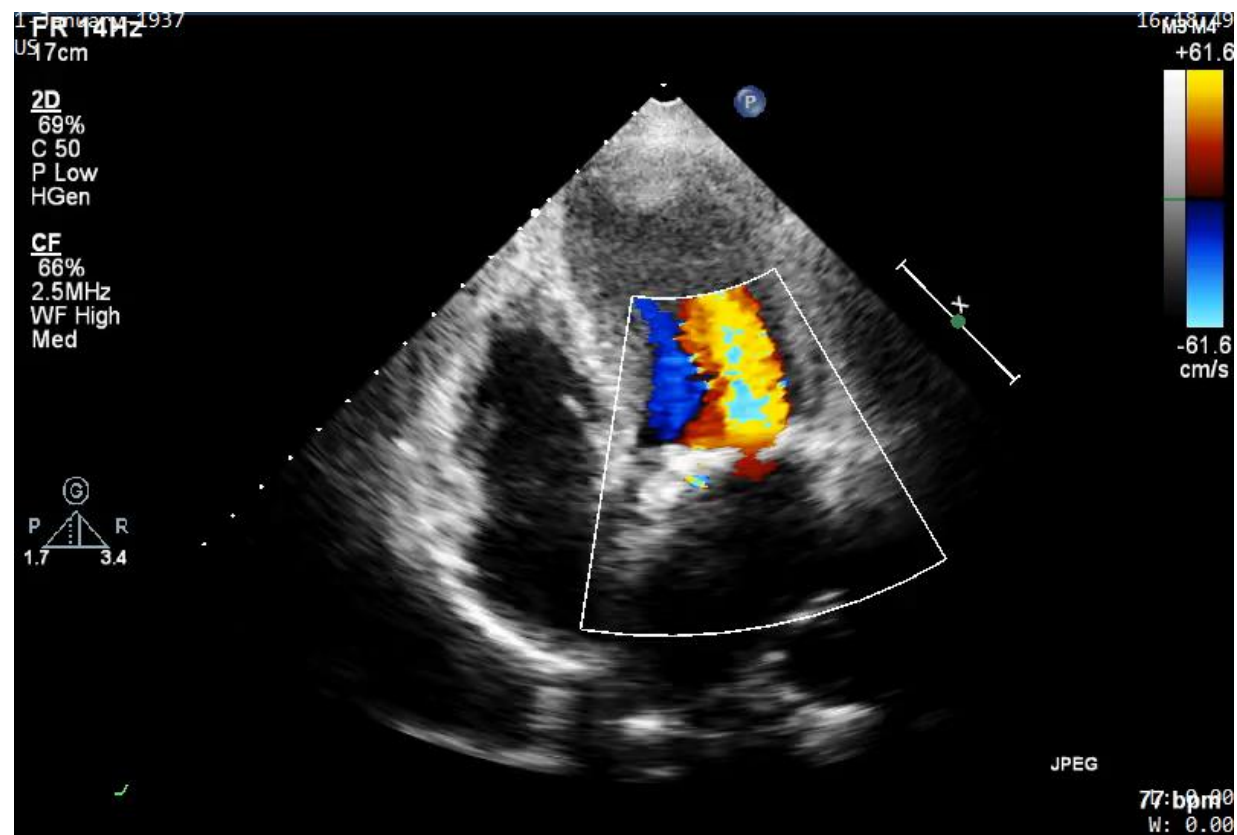
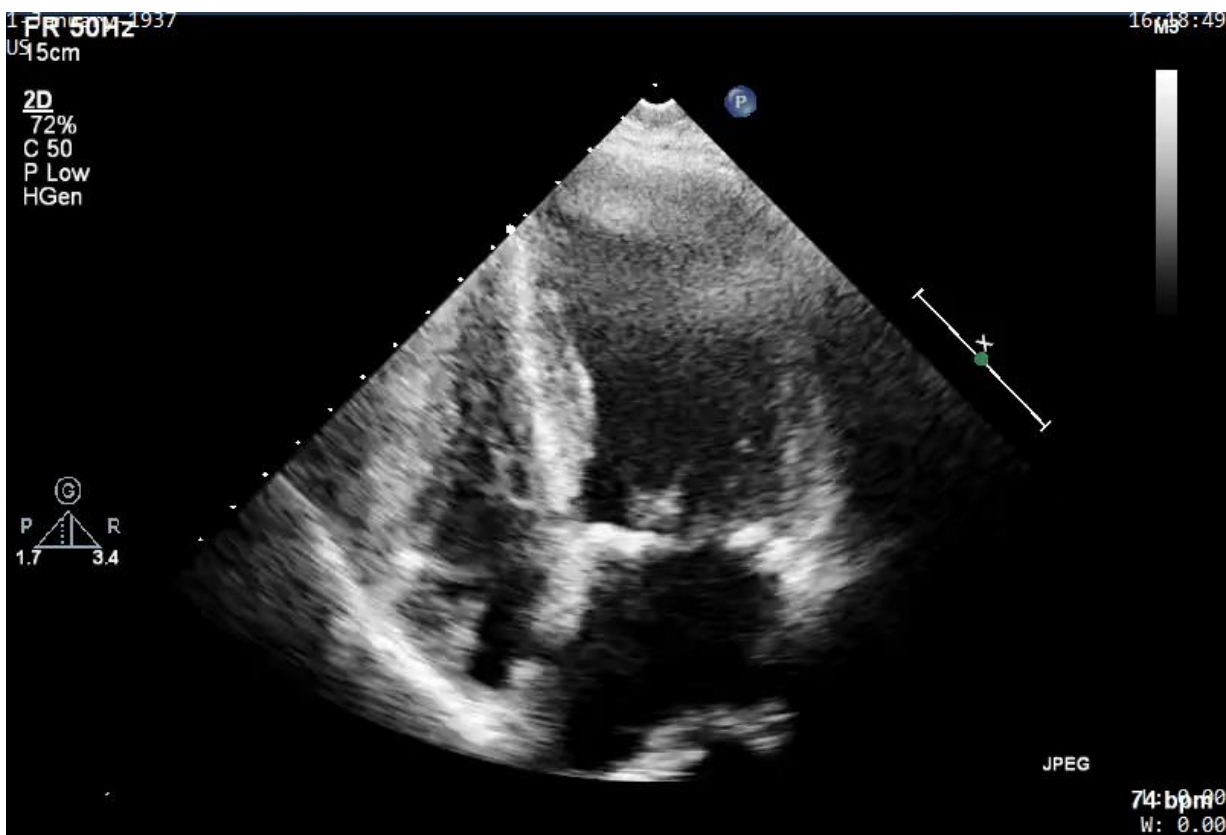
Staged TAVI procedure with Portico 27mm under cerebral protection device



Staged TAVI procedure with Portico 27mm under cerebral protection device



Follow up Echocardiogram



Discussion

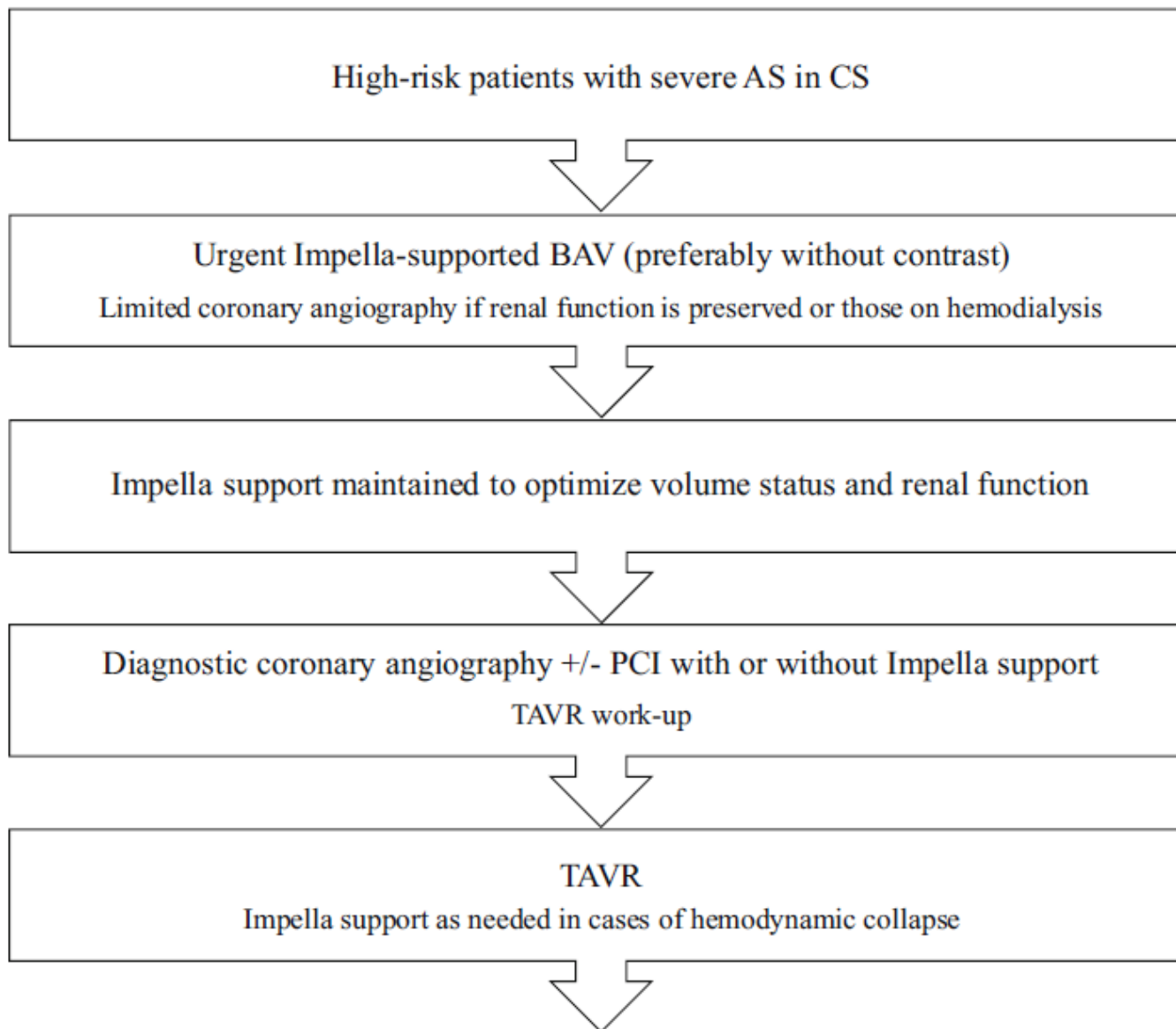
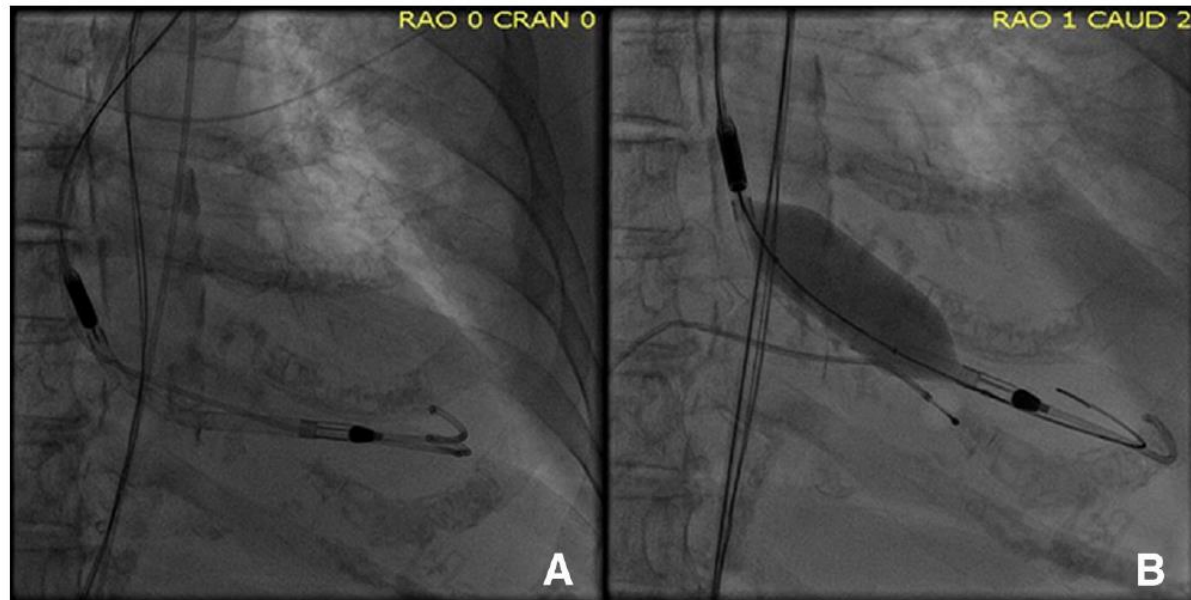
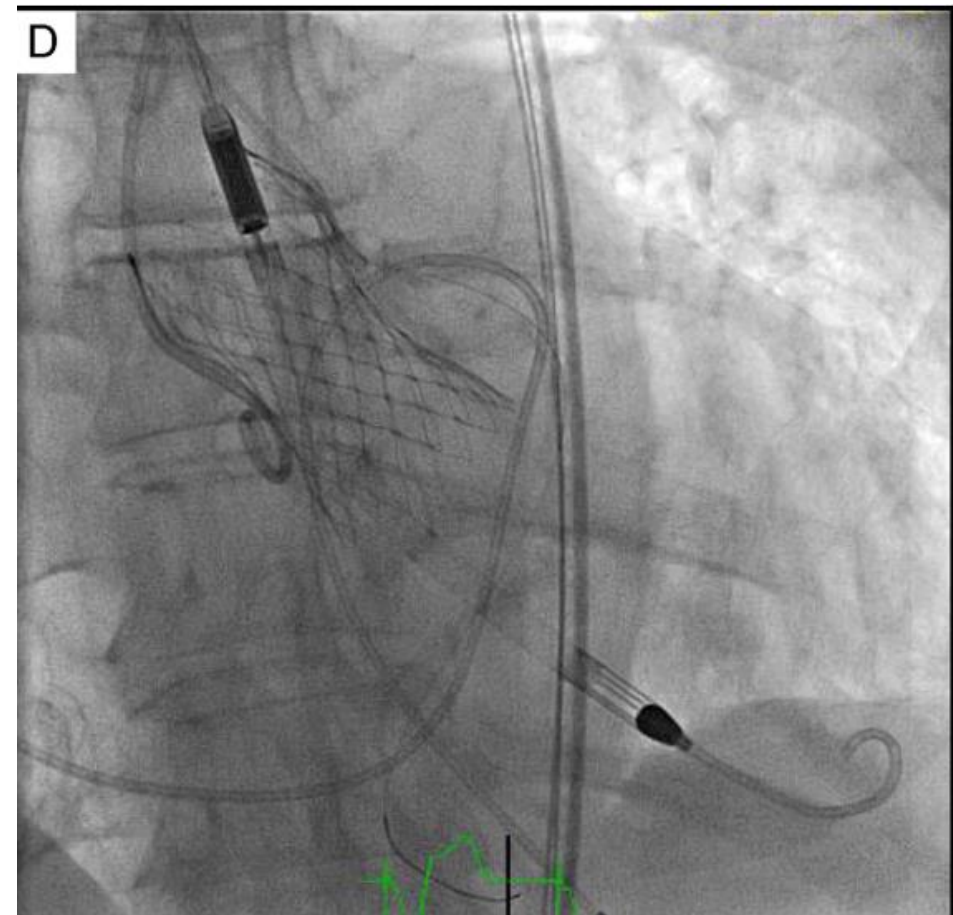


Fig. 3. Proposed management algorithm for patients with severe AS in CS.

Impella assisted BAV



Impella in cardiogenic shock complicating TAVI



Take home message

- BAV in severe aortic stenosis and cardiogenic shock as a bridge to definitive TAVI procedure
- BAV in severe aortic stenosis prior to Impella 2.5 insertion
- Impella 2.5 support for protected complex PCI procedure

- (Impella assisted BAV)
- (Impella in cardiogenic shock complicating TAVI)

THANK YOU

