

Tough TAVI Case For Patient with Bicuspid Aortic Valve and Porcelain Aorta

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Case presentation

- ✧ Female, 83 yrs
- ✧ Recurrent chest discomfort for 3 years, aggravated for 20 days
- ✧ NYHA IV
- ✧ PMH
 - ✧ CAD
 - ✧ Hypertension
 - ✧ Anemia
 - ✧ Gastrointestinal bleeding
 - ✧ Intestinal polypus
- ✧ Log EuroScore = 23.92% STS = 8.3%
- ✧ Surgical extreme risk
- ✧ Heart valve team suggested TAVI.

Echo

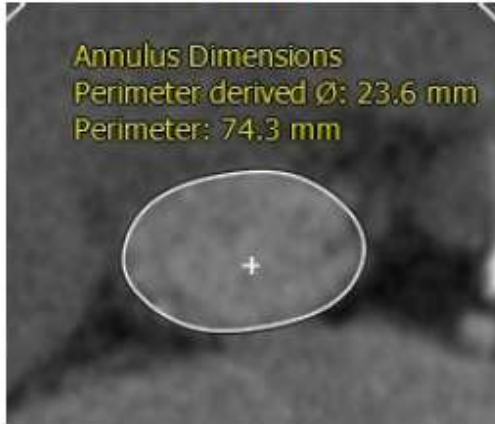
- LVEF = 46.2%
- LVIDd = 5.22cm LA = 5.55cm
- Severe AS
 - $PG_{\text{mean}} = 79 \text{ mmHg}$
 - $V_{\text{max}} = 5.84 \text{ m/s}$
 - $AVA = 0.32 \text{ cm}^2$
- AR: moderate
- MR: mild
- TR: severe



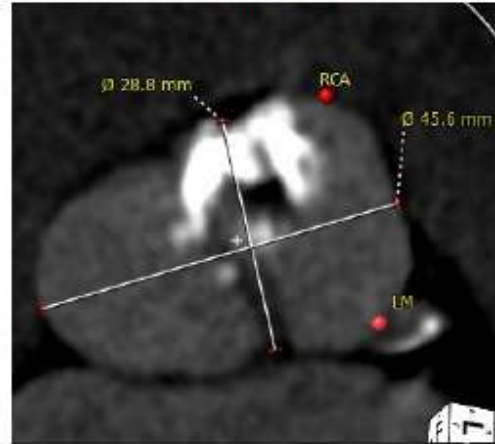
CTA

Aorta

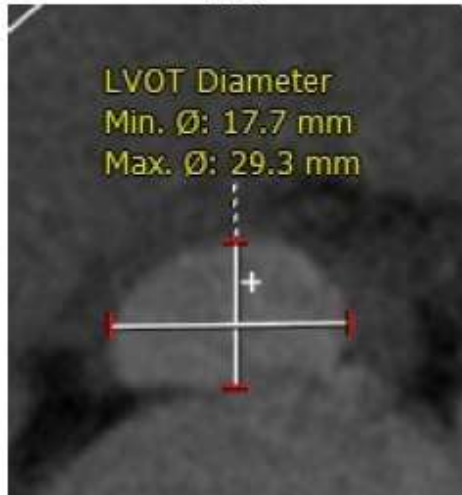
ANNULUS



SOV DIAMETER

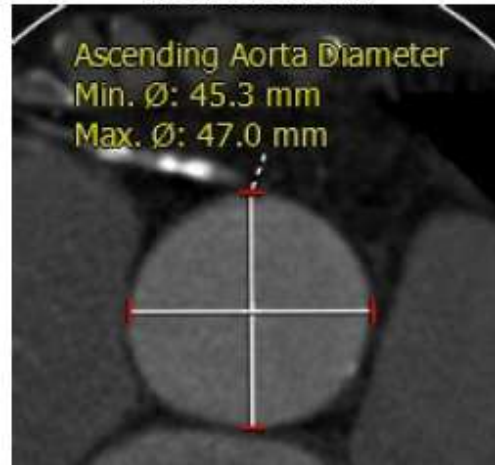


LVOT



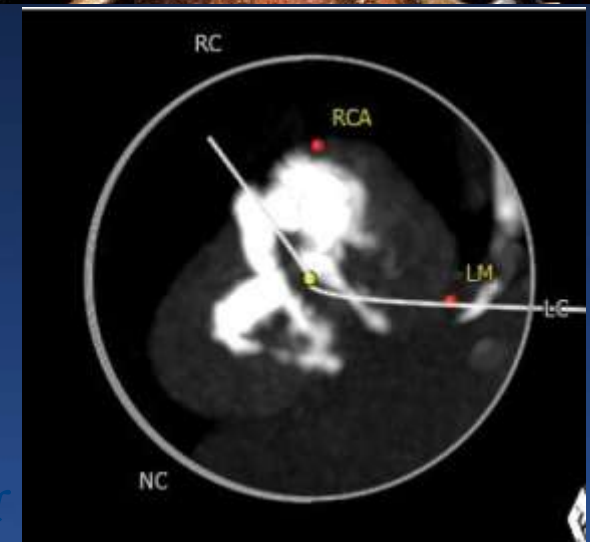
5mm below basal plane

ASCENDING AORTA



40mm above basal plane

Annular Angulation



CTA

Ø 15.6 / 16.0 mm

Ø 9.9 / 11.0 mm

Ø 10.6 / 10.8 mm

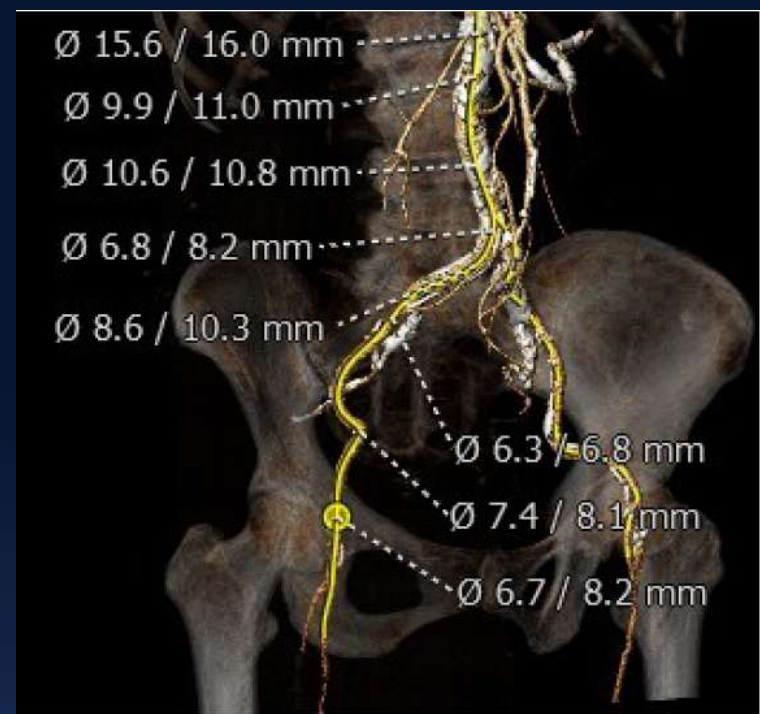
Ø 6.8 / 8.2 mm

Ø 8.6 / 10.3 mm

Ø 6.3 / 6.8 mm

Ø 7.4 / 8.1 mm

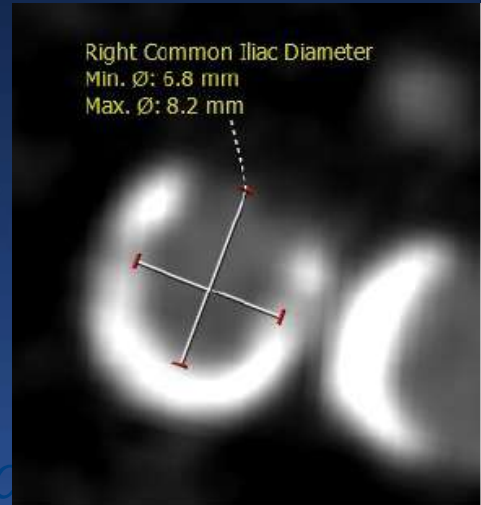
Ø 6.7 / 8.2 mm



Right Common Iliac Diameter

Min. Ø: 5.8 mm

Max. Ø: 8.2 mm



TAVI procedure

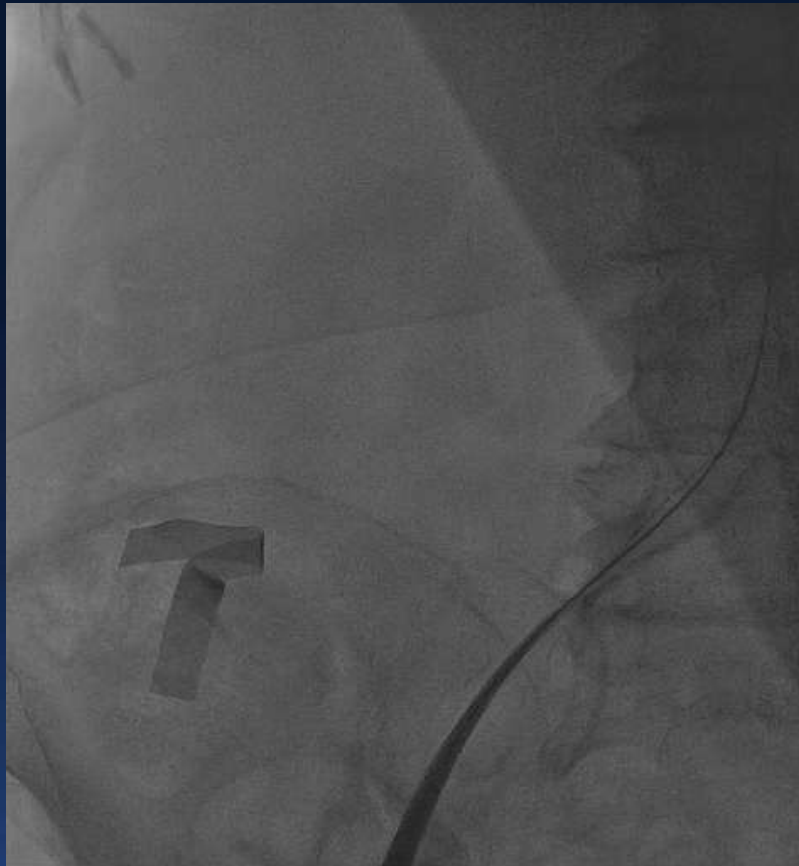
- ✧ **General anesthesia**
- ✧ **Access: right femoral artery**
- ✧ **2 Proglides**
- ✧ **Balloon: ZMED II 20mm**
- ✧ **Valve: CoreValve 26 mm**
 - ✧ **Only one 26mm available**
 - ✧ **Many 29mm available**



The Needs of The Patients and The Customers Come First



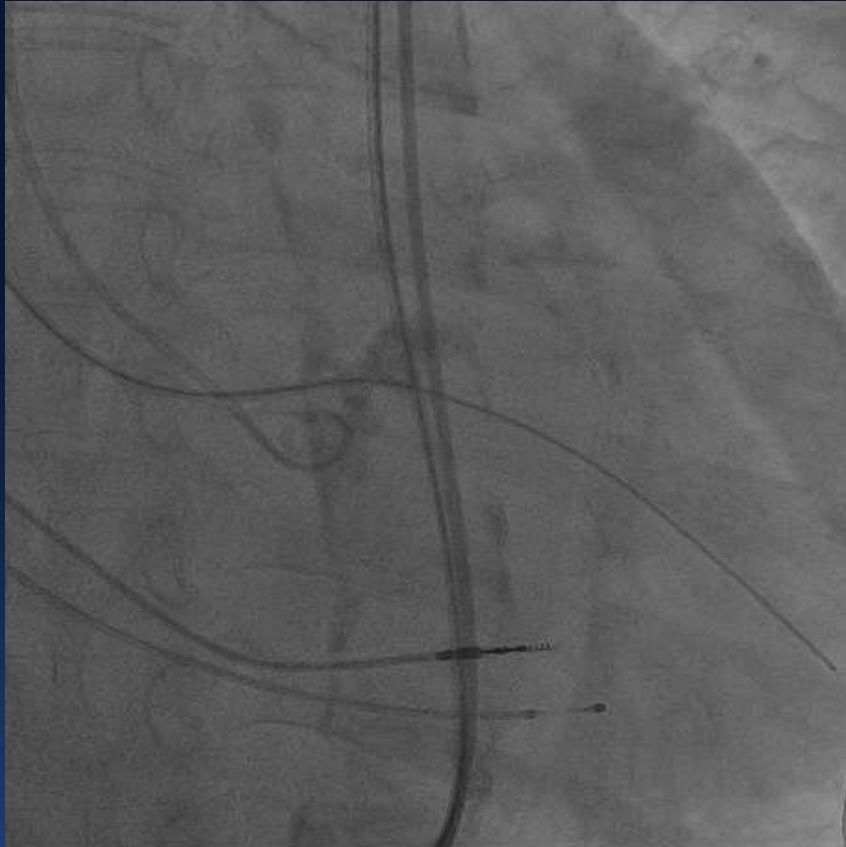
The Needs of The Patients and The Customers Come First



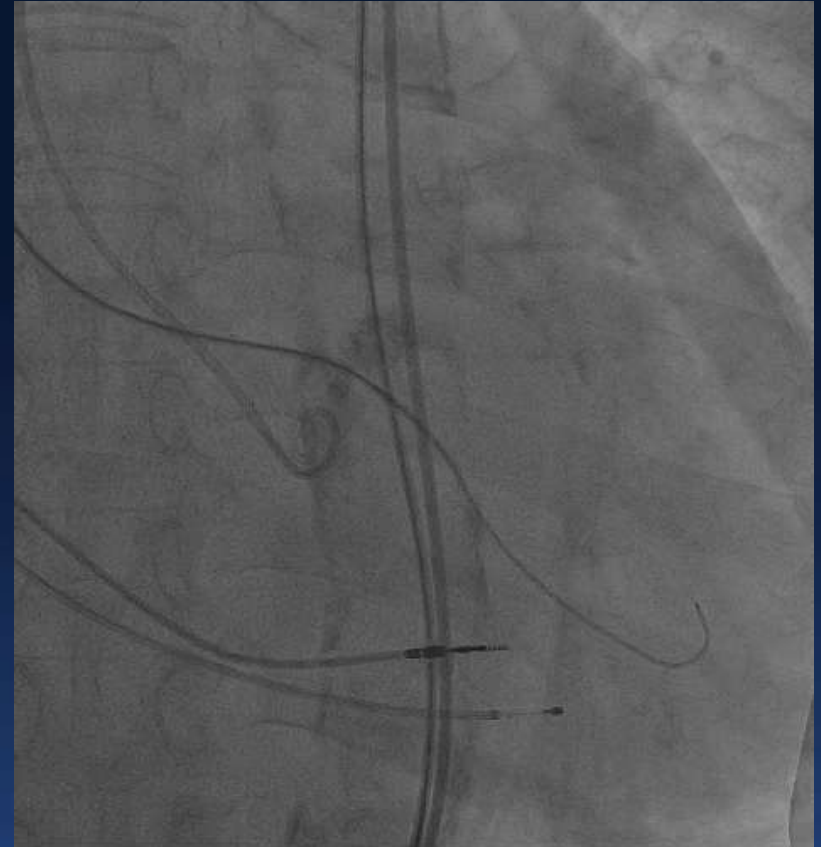
The Needs of The Patients and The Customers Come First



The Needs of The Patients and The Customers Come First



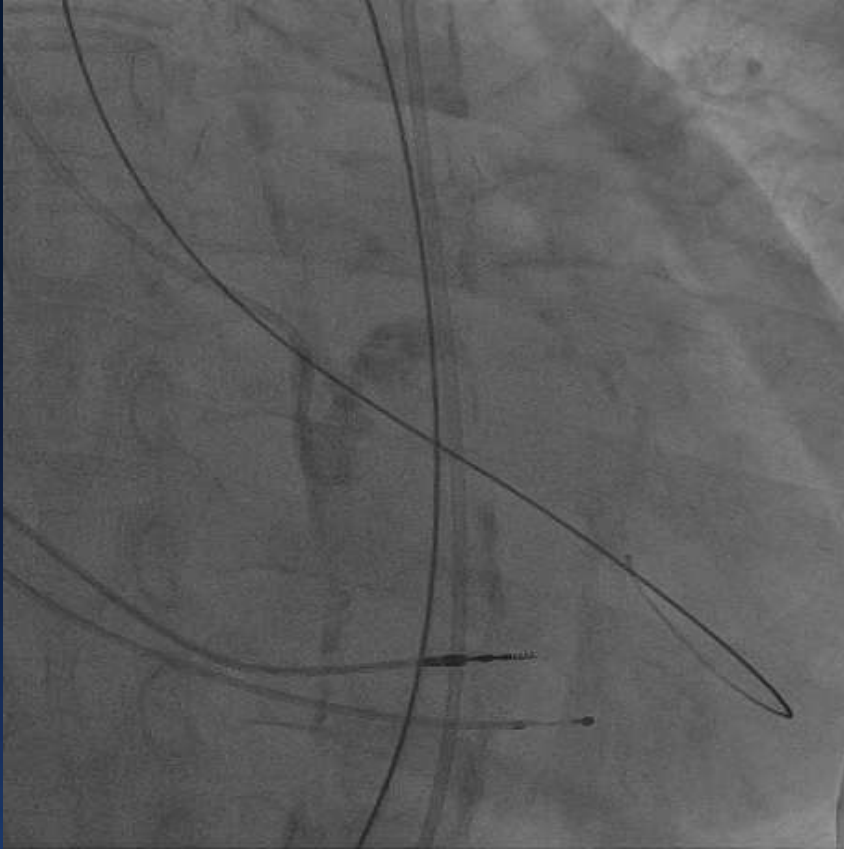
6F AL1.0 failed to cross



5F pigtail crossed

The Needs of The Patients and The Customers Come First

20mm ZMED II failed to cross



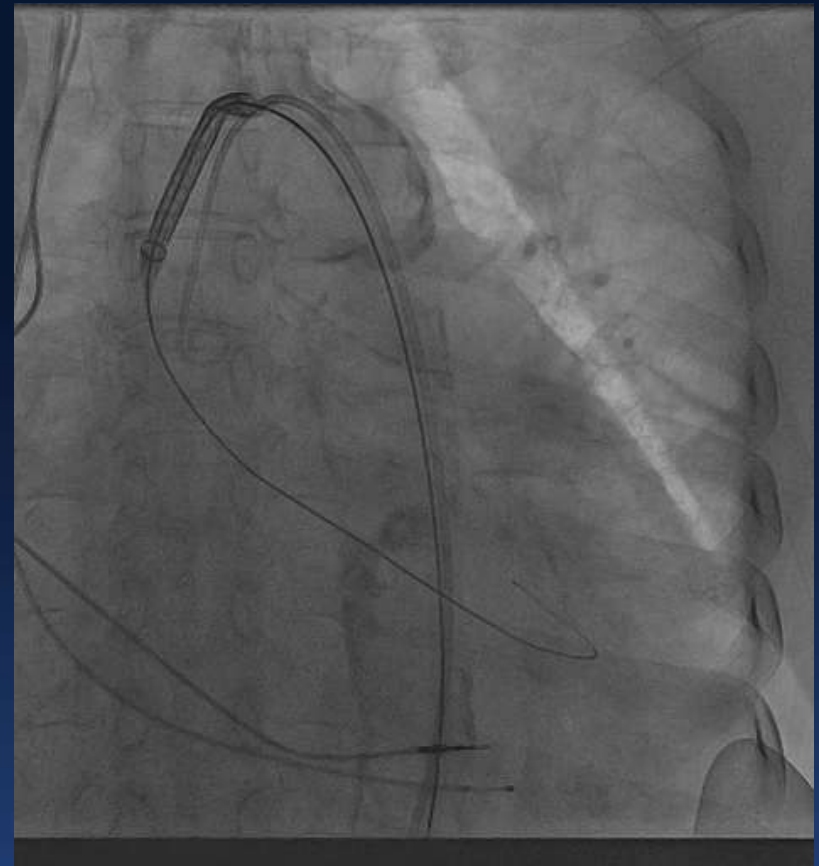
Changed to 18mm ZMED II



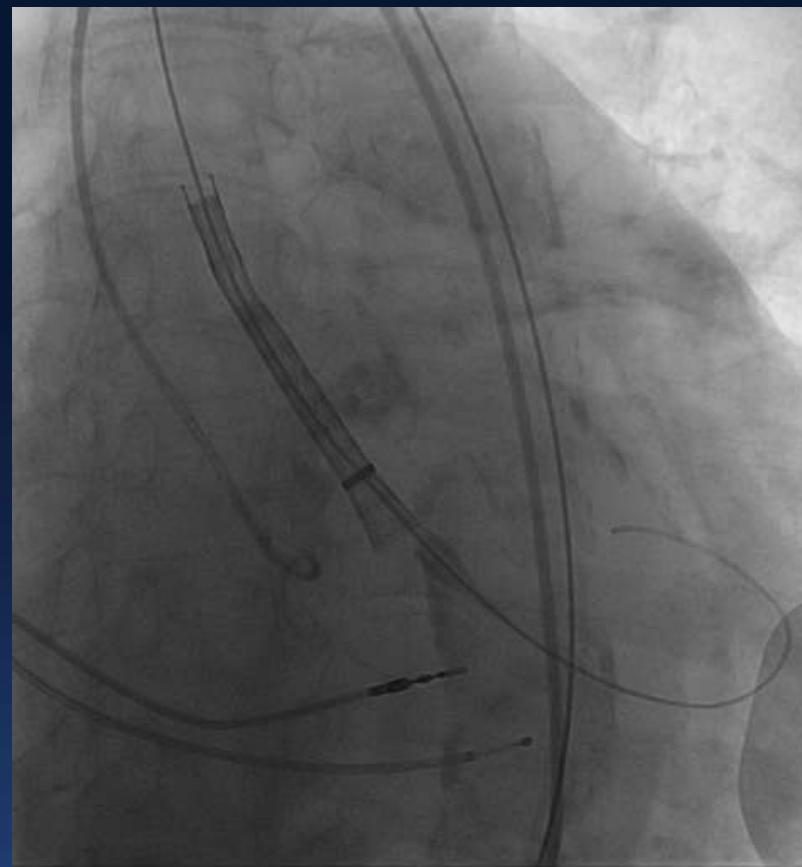
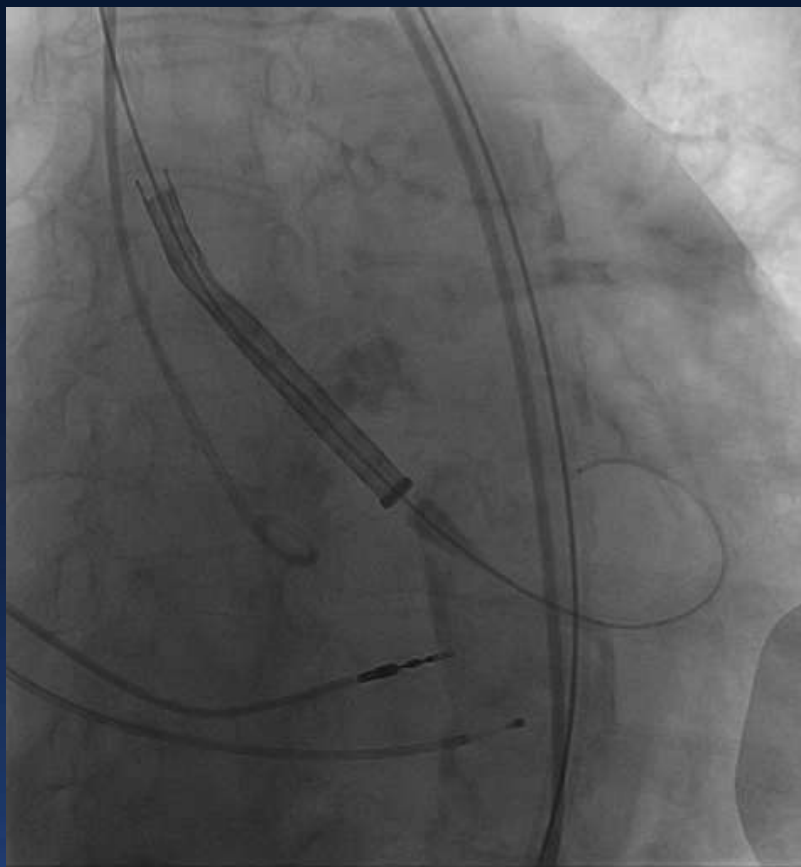
18mm ZMED II



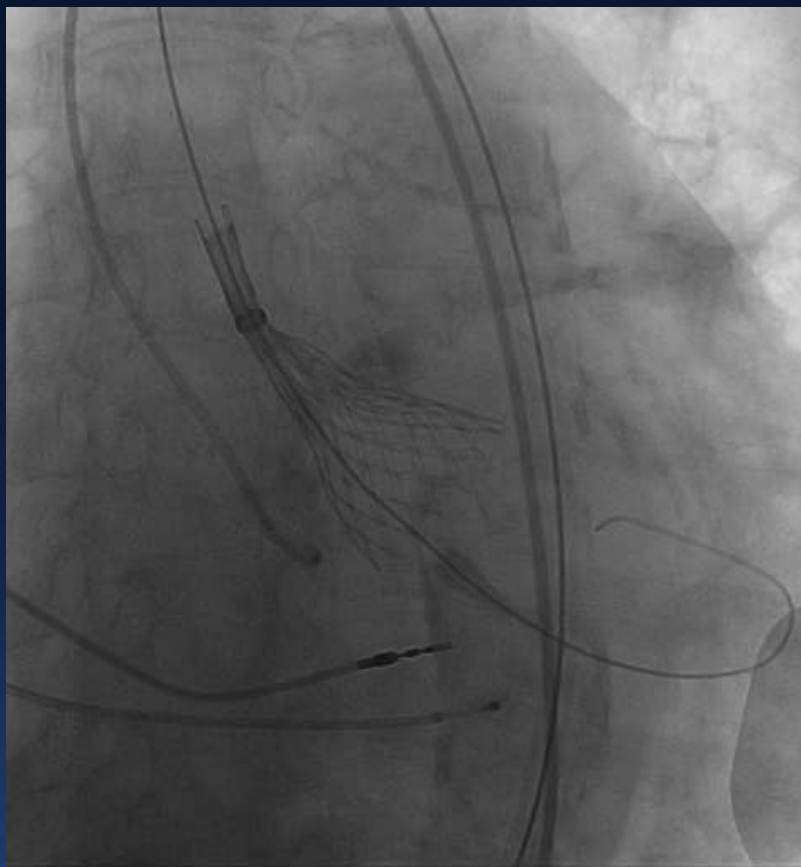
20mm ZMED II



The Needs of The Patients and The Customers Come First



The Needs of The Patients and The Customers Come First



The Needs of The Patients and The Customers Come First

Final Result



The Needs of The Patients and The Customers Come First



Pre-TAVI



Post-TAVI

The Needs of The Patients and The Customers Come First



The Needs of The Patients and The Customers Come First

1m follow up

- **Symptom obviously relieved**
- **NYHA II~III**
- **Echo**
 - **LVEF = 54.7%**
 - **LVIDd = 4.91cm LA = 4.88cm**
 - **$PG_{\text{mean}} = 9\text{mmHg}$**
 - **$V_{\text{max}} = 2.3\text{m/s}$**
 - **$AVA = 1.56\text{cm}^2$**
 - **TR: moderate**

Take Home Message

- **TAVI is suitable for patients with bicuspid aortic valve and porcelain aorta.**
- **Heart team and corporation with all related departments are very important.**
- **Careful evaluation before procedure is essential.**
- **Experience and skill are the basic to treat tough TAVI case.**

Acknowledgement

