

14th

AICT
ASIAN INTERVENTIONAL CARDIOVASCULAR THERAPEUTICS
THE OFFICIAL CONGRESS OF APSIC

Experience sharing of Evolut-PRO in complex TAVI cases

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Prince of Wales Hospiyal

I have the following potential conflicts of interest to report:

I am a physician proctor for CoreValve/Evolut (Medtronic) TAVI device

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Evolut PRO Transcatheter Valve



ADVANCED SEALING

Building on Proven Design for **Advanced Sealing**



Conformable Frame

Self-expanding nitinol frame conforms to annulus

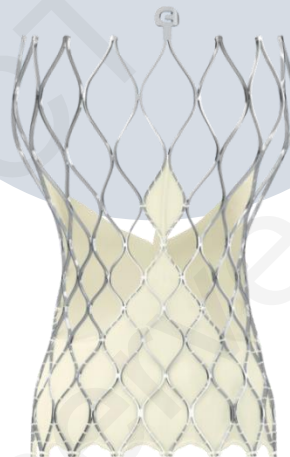


CoreValve



Consistent Radial Force

Frame oversizing and cell geometry provide consistent radial force across treatable annulus range

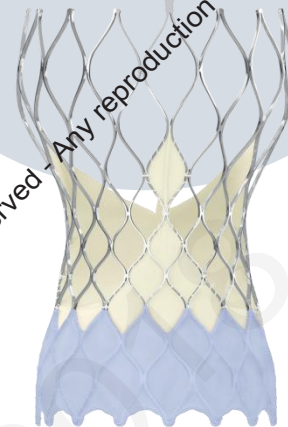


Evolut R



External Wrap

External wrap increases surface contact with native anatomy



Evolut PRO

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Case 1

- 80-year-old woman; Walks unaided; Lives with family
- Past health:
 1. HT
 2. Inferior AMI with PCI to RCA (DES) in 2012
 3. UGIB due to bleeding GU

Clinical presentation : NSTEMI in 02/17 with CHF. NYHA class III, CCS III

- Coro: ostial LM 95% critical lesion, pLAD 70%, pLCx 90%, Patent RCA stents
- Echo: calcified trileaflet AV with severe AS (AVA 0.75cm²), hypokinesia over anterior, anteroseptal & anterolateral segment, LVEF = 36%

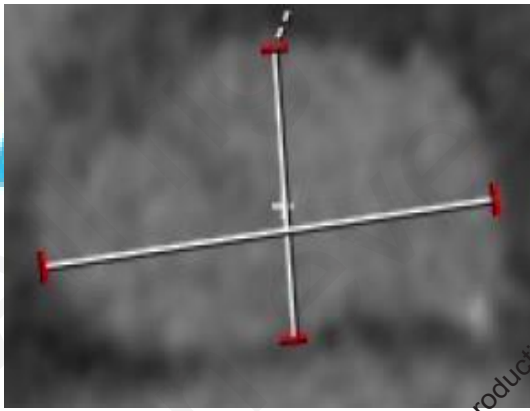
Case 1

- STS for SAVR + CABG:
PROM 14.7%; M&M 42%
 - CTS of Heart team: NOT a surgical candidate for SAVR + CABG in view of comorbidities
- => PCI to LM & pLAD & pLCx, then staged TAVI

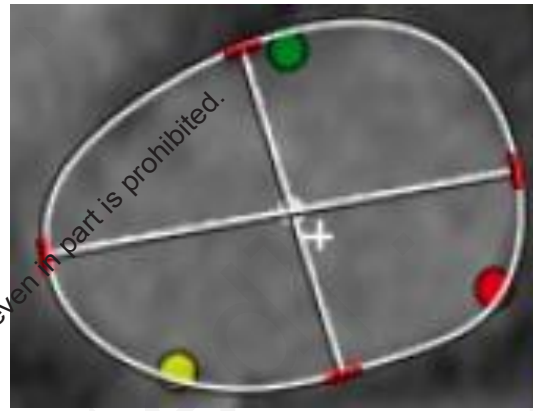


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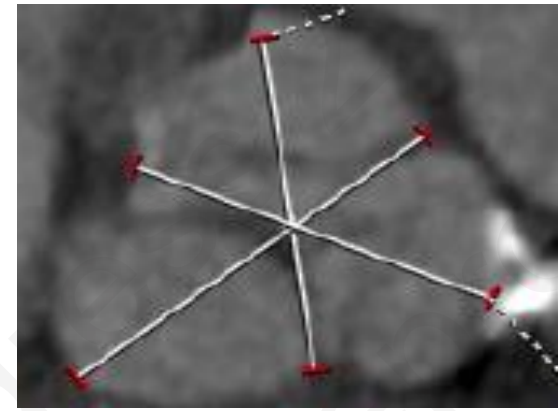
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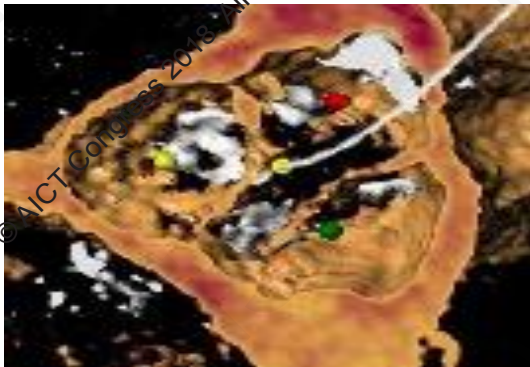
LVOT:
Min 12.9mm
Max 24.1mm



Annulus:
Perimeter 58.9mm
Diameter 18.7mm



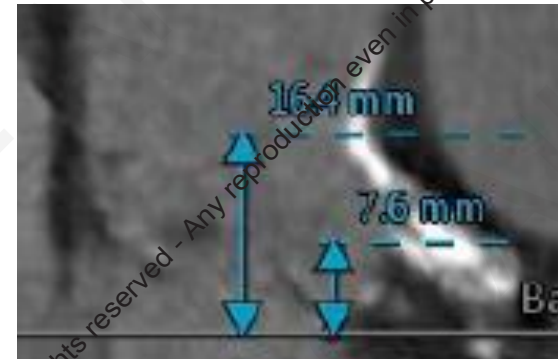
Sinus of Valsalva
24.0mm x 27.8mm
x 24.2mm



Trileaflet AV
Moderate
calcification



Right coronary
ostium height
12.9 mm

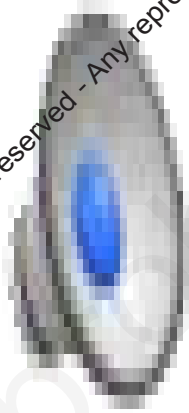


Left coronary
ostium height
7.6 mm

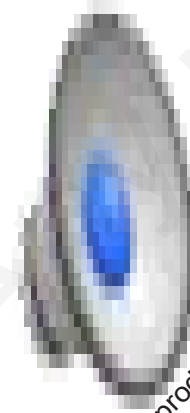
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Evolut-PRO 23mm



Baseline Aortogram

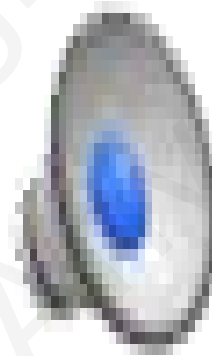


**Final Aortogram
showed no PVL**

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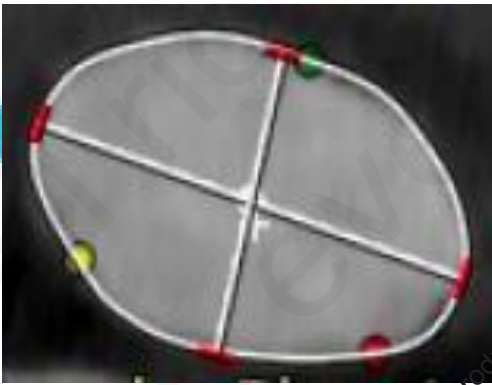


Post TAVI day 3 TTE: No PVL!

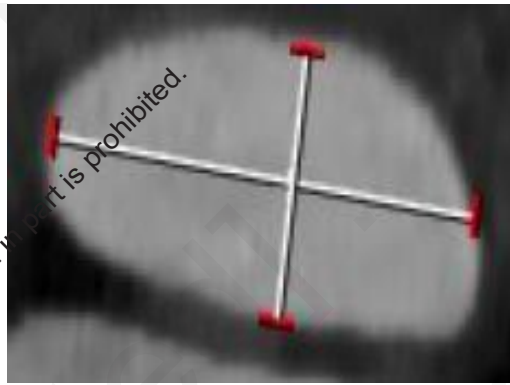
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Case 2

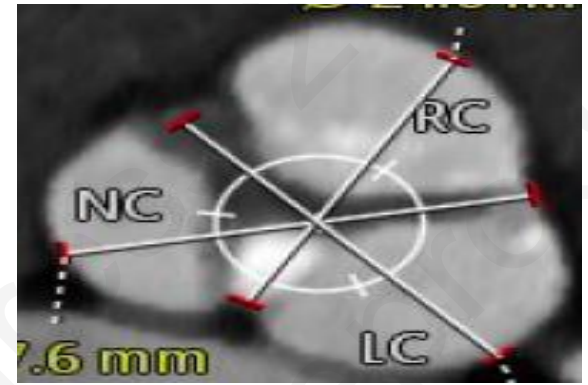
- 93-year-old lady; BW 46 kg
Height 140 cm
- Premorbid: walk unaided lives with family
- Medical history: Atrial fibrillation; HT; Gout
- Recurrent admission for shortness of breath with NYHA class III
- Echo: calcified AV with severe AS (peak/ mean PG 97/ 59 mmHg. AVA 0.4cm²). Moderate MR/TR. LVEF 50%
- Coro: LM/LCX/RCA normal; pLAD 90%
=> PCI to pLAD with DES
- STS score for SAVR+ CABG: PROM 17.6%, M&M 44.9%



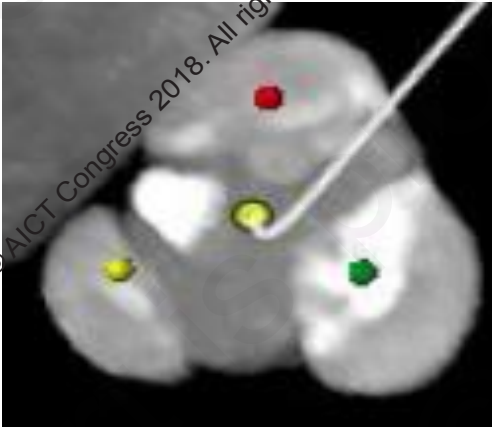
LVOT:
Min 13mm
Max 25mm



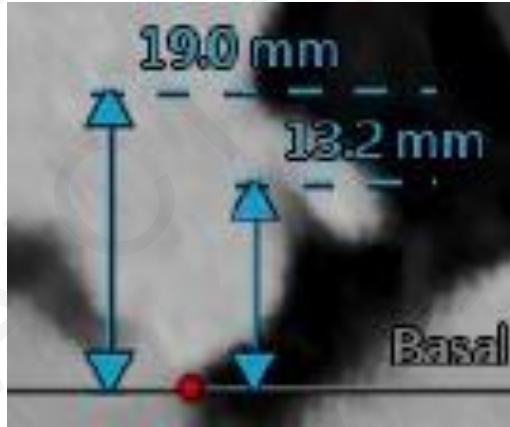
Annulus:
Perimeter 63.8mm
Diameter 20.3mm



Sinus of Valsalva
27.6mm x 27.6mm
x 24.6mm



Trileaflet AV
Moderate
calcification



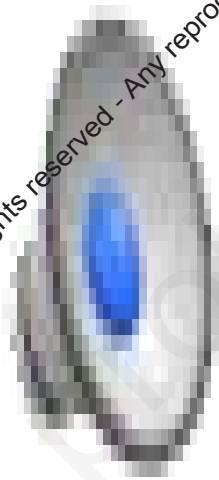
left coronary
ostium height
13.2 mm



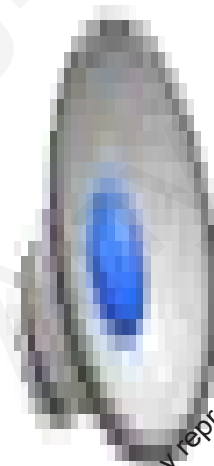
Right coronary
ostium height
15.3 mm

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AICT Evolut-PRO 26mm



**Grade II PVL
just after deployment**

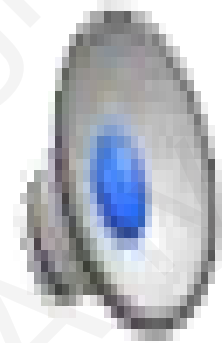
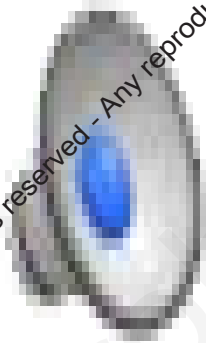


**Grade I PVL
after 20mm balloon
postdilatation**

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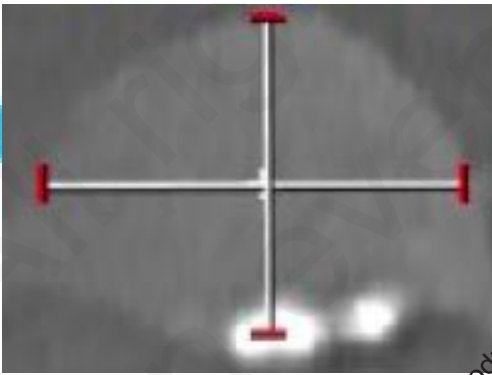


Post TAVI day 3 TTE: Mild PVL

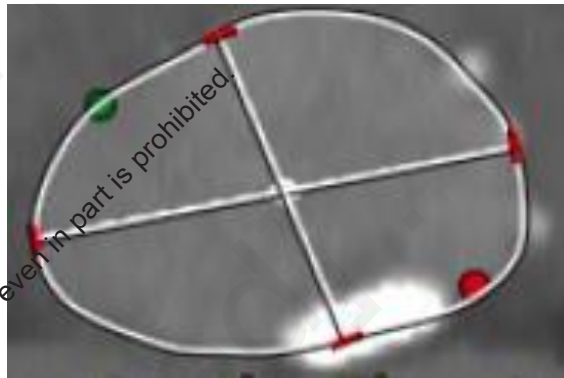
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Case 3

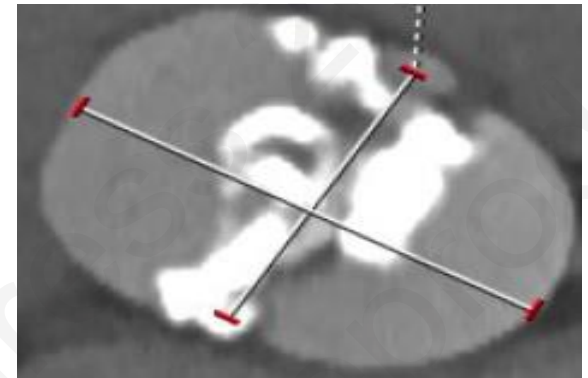
- 84-year-old man; Weight 48.5 kg
Height 166 cm; ADL, walks unaided
- Past Medical History:
 - Chronic HCV carrier with varices
 - Chronic alcoholism
 - Atrial fibrillation
 - COAD and pulmonary TB, with history of Left pneumothorax
 - PPU with repair in 1969
- Recurrent admission for CHF; NYHA III; CCS II
- Echo: Concentric LVH, normal LV systolic function, LVEF 72%; severely calcified AV (peak/mean PG gradient 102/ 60 mmHg)
- Coro: normal LM. no obstructive lesion over LAD & LCx; diffuse diseased RCA with 50-70% mPDA stenosis.
- STS score for SAVR: PROM 8.4%, M&M 27.6%



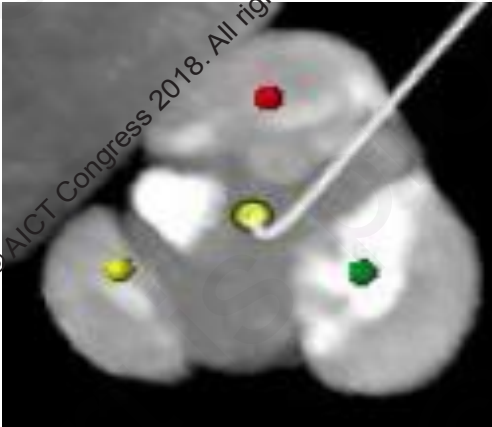
LVOT:
Min 15.8mm
Max 23.1mm



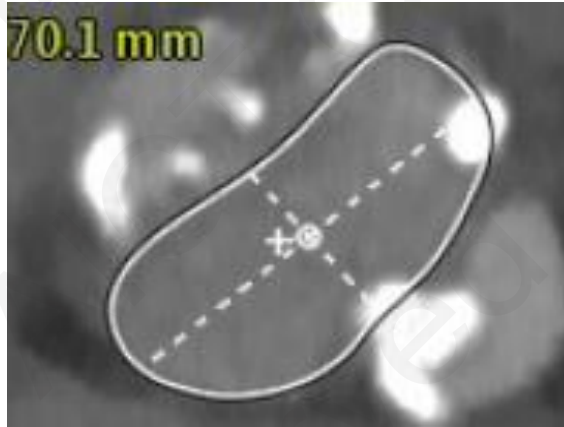
Annulus:
Perimeter 73.5mm
Diameter 23.4mm



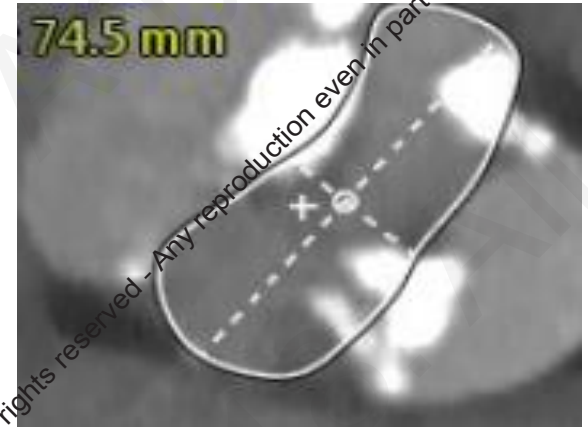
Sinus of Valsalva:
27.7mm x 40.0mm



Trileaflet AV
Severe
calcification



5mm above
annulus:
Perimeter 70.1mm



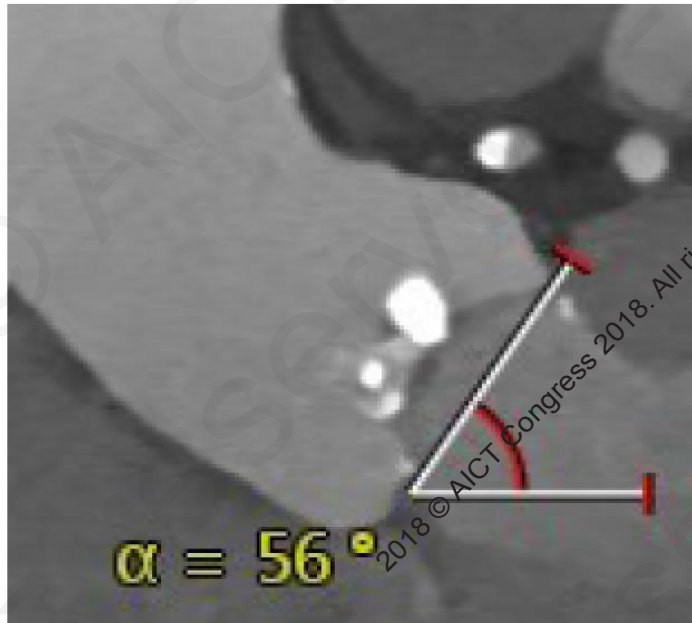
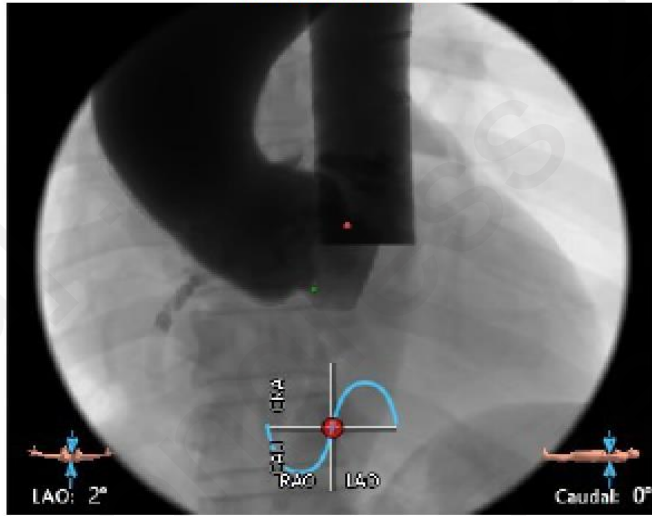
8mm above
annulus:
Perimeter 74.5mm

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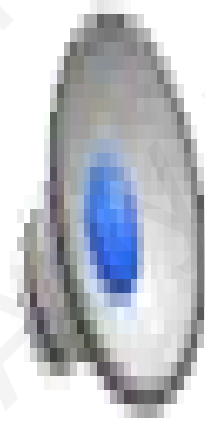
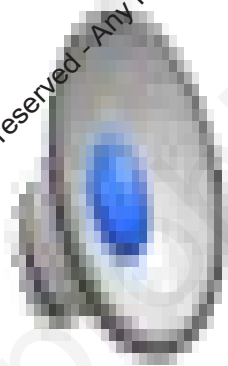
AORTIC ROOT



IMPLANTER'S VIEW



Baseline TTE and Aortogram

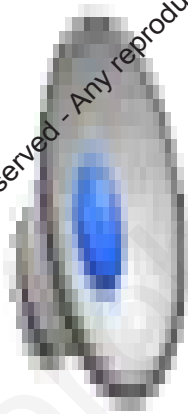


Very calcified bicuspid aortic valve

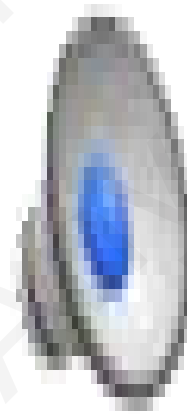
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Evolut-PRO 29mm



**Grade II PVL
just after deployment**



**Grade I PVL
after 22mm balloon
post-dilatation**

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Post TAVI day 3 TTE



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Conclusion

- Medtronic Evolut PRO could provide additional sealing with much lower PVL after TAVI across different device size.
- Even in horizontal aorta and Bicuspid AV, the Evolut PRO could also maintain the excellent platform performance of the Evolut R system.

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2018
APCASH



9th Asia Pacific Congenital and Structural Heart Intervention Symposium



6 – 7 October, 2018

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7 - 9th September 2018

Hong Kong

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