Sapien 3 THV with Future Coronary Access

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Disclosure Statement of Financial Interest

Within the past 12 months, I or my spouse/partner have had a financial interest/arrangement or affiliation with the organization(s) listed below.

Affiliation/Financial Relationship	Company
• Grant/Research Support	• Edwards Lifesciences, Abbott
• Scientific Advisory Board	• Medtronic, Abbott
• Executive Physician Council	• Boston Scientific Corp

Treatment of CAD: Before, During or After TAVR?

- Before: For complex lesions (e.g. rotoblator)
  - More time, contrast devoted to the procedure
  - Another procedure, interacts with LV demand
- During: Convenient for the patients
  - Simpler for patients, address supply and demand, support if necessary
  - More contrast, time, DAPT loaded
- After: New lesions
  - Access through valve frame may be unpredictable

PCI After TAVR

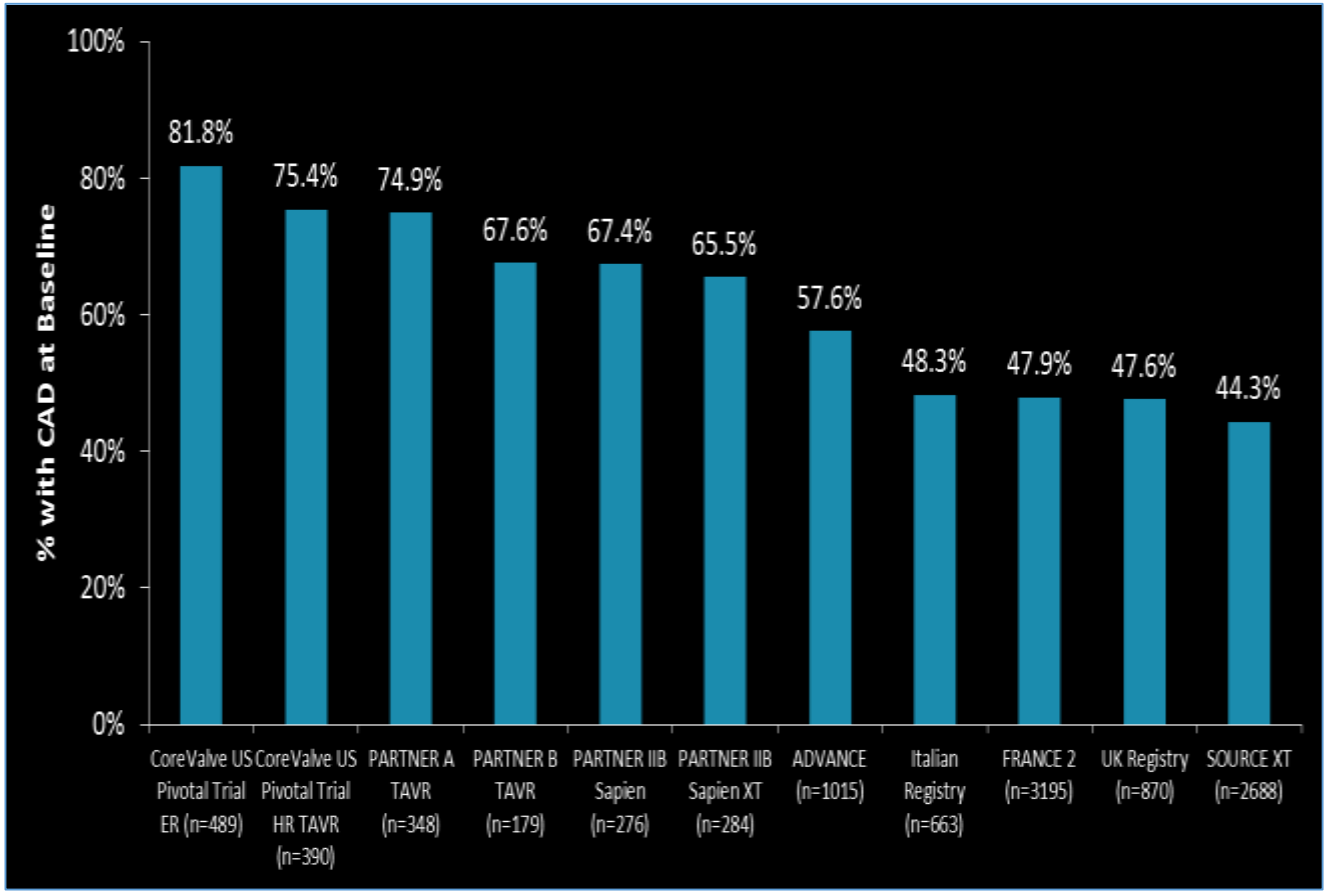
In current practice, post-TAVR PCI remains an uncommon (but feasible) procedure

	Kerckhoff-Klinik	Segeberg Registry	UK Registry	TAVR-LM Registry
Incidence	**35 / 1,000 (3.5%)**	**17 / 296 (5.7%)**	**18 / 2,588 (0.7%)**	**9 / 6,405 (0.1%)**
ACS Indication	11.4%	37.5%	65%	78%
Time to Intervention Post-TAVR	233 ± 158 days	17.7 months (range: 1-72)	136 days (range: 1-1092)	368 days (IQR: 204-534)
Type of TAV Implanted			Not Reported	
CoreValve	29%	100%		44%
SAPIEN XT	54%			55%
JenaValve	3%			
Symetis	11%			
Portico	3%			
Procedural Success	74%	95.8%	Not Reported	100%

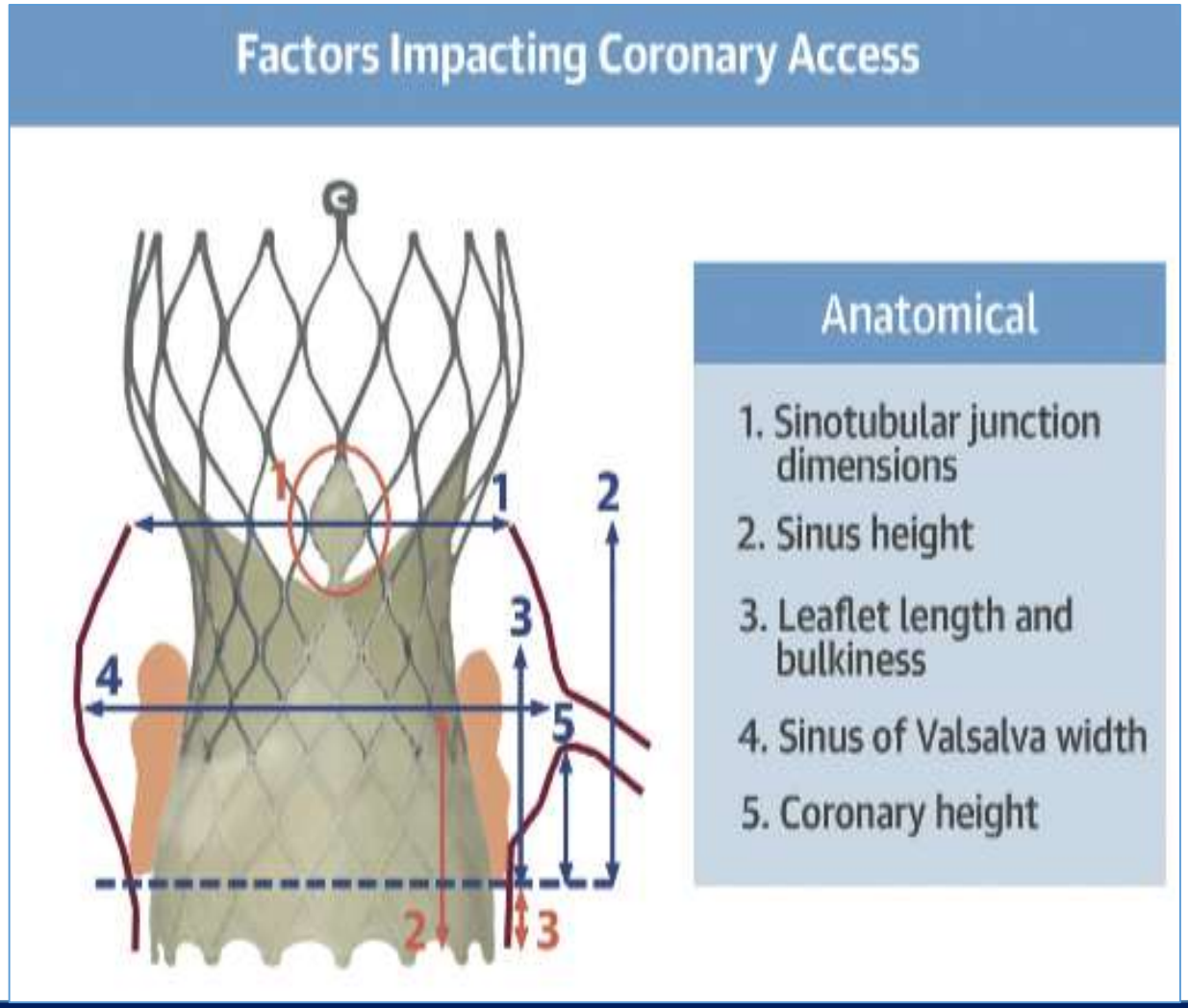
[1]Blumenstein, et al., *Clin Res Cardiol* 2015; 104:632-39; [2]Allali, et al., *Cardiovasc Revasc Med* 2016; epub ahead of print; [3]Snow, et al., *Int J Cardiol* 2015; 199:253-60; [4]Chakravarty, et al., *J Am Coll Cardiol* 2016; 67:951-60

Coronary Artery Disease in the TAVR Patient

- Coronary artery disease is highly prevalent in the TAVR population, possibly affecting 80% of the cohort



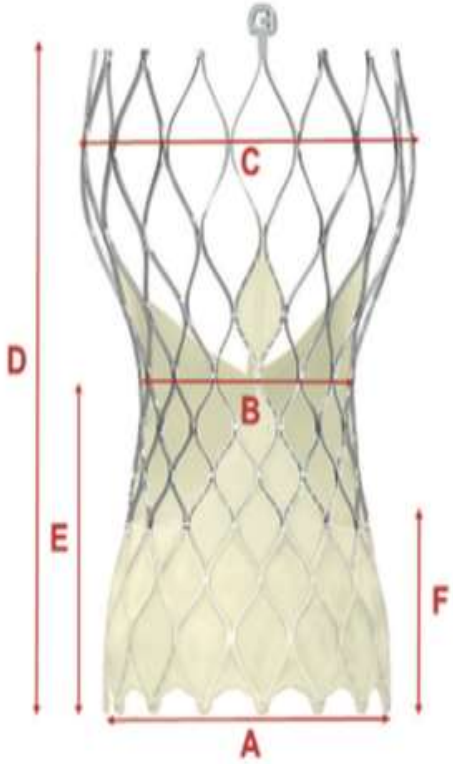
Reaccess to Coronaries: Anatomic Considerations



[1]Yudi, et al., *J Am Coll Cardiol* 2018; 71(12):1360–78

Understand the Device

FIGURE 1 Repositionable Self-Expanding Valves With and Without an External Pericardial Wrap: Features and Dimensions

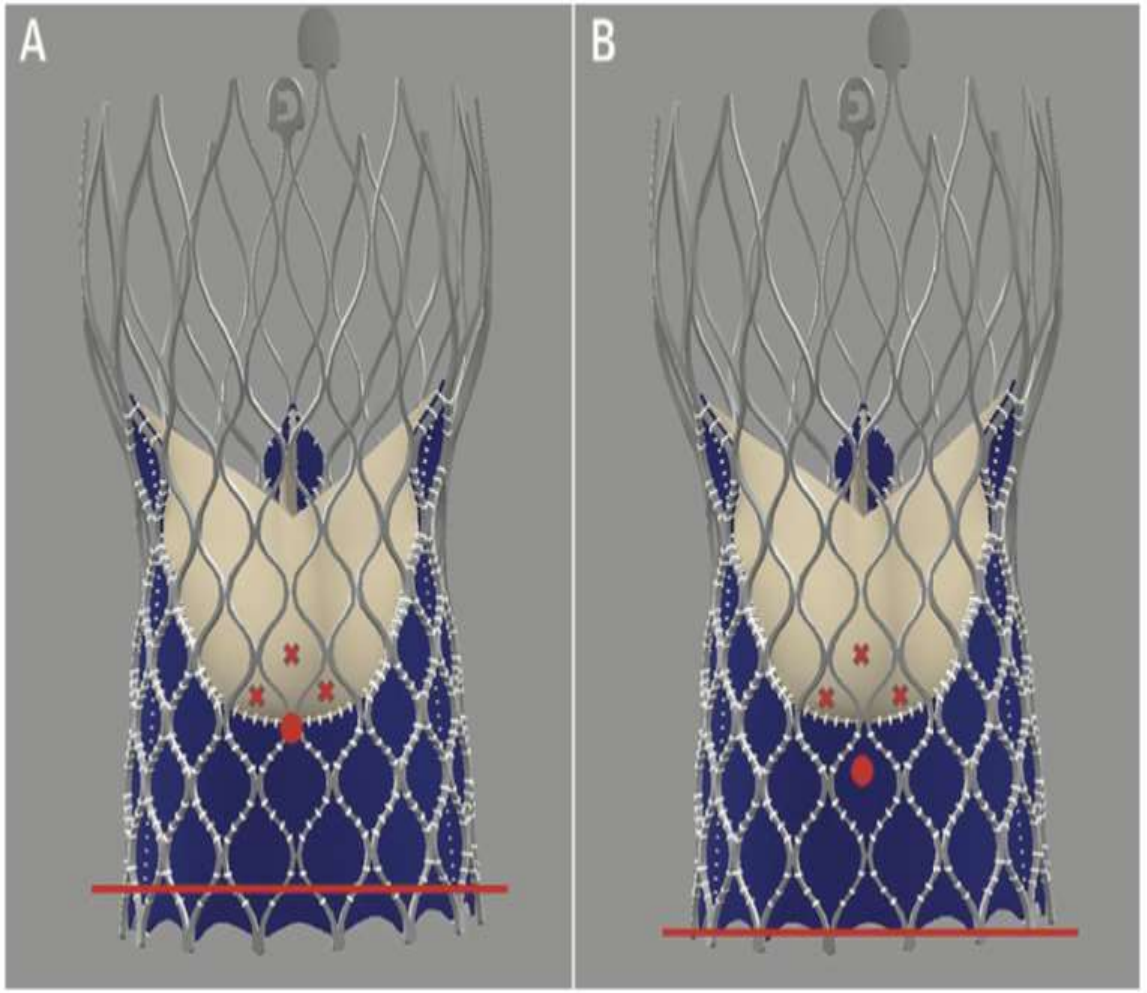


	23mm Evolut R / PRO	26 mm Evolut R / PRO	29mm Evolut R / PRO	34mm Evolut R
A. Inflow Diameter	23 mm	26 mm	29 mm	34 mm
B. Waist Diameter	20 mm	22 mm	23 mm	24 mm
C. Outflow Diameter	34 mm	32 mm	34 mm	38 mm
D. Frame height	45 mm	45 mm	45 mm	46 mm
E. Commissure Height	26 mm	26 mm	26 mm	26 mm
F. Skirt Height	13 mm	13 mm	13 mm	14 mm

Various dimensions of the Evolut-R and Evolut-PRO CoreValve (Medtronic, Galway, Ireland) are listed for comparison.

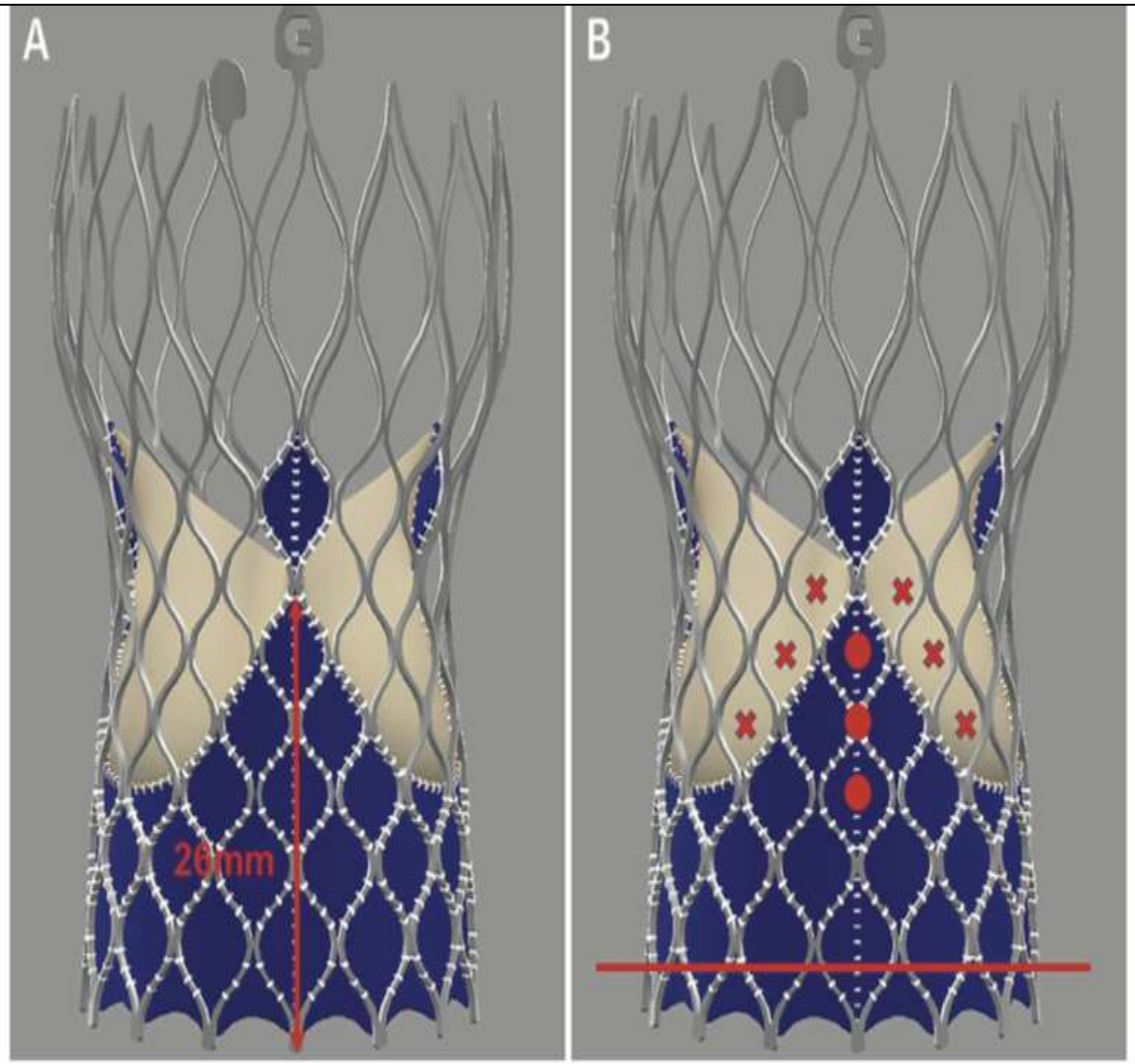
[1]Yudi, et al., *J Am Coll Cardiol* 2018; 71(12):1360–78

Self-Expanding Valve and Coronary Depending on Implantation Depth



[1]Yudi, et al., *J Am Coll Cardiol* 2018; 71(12):1360–78

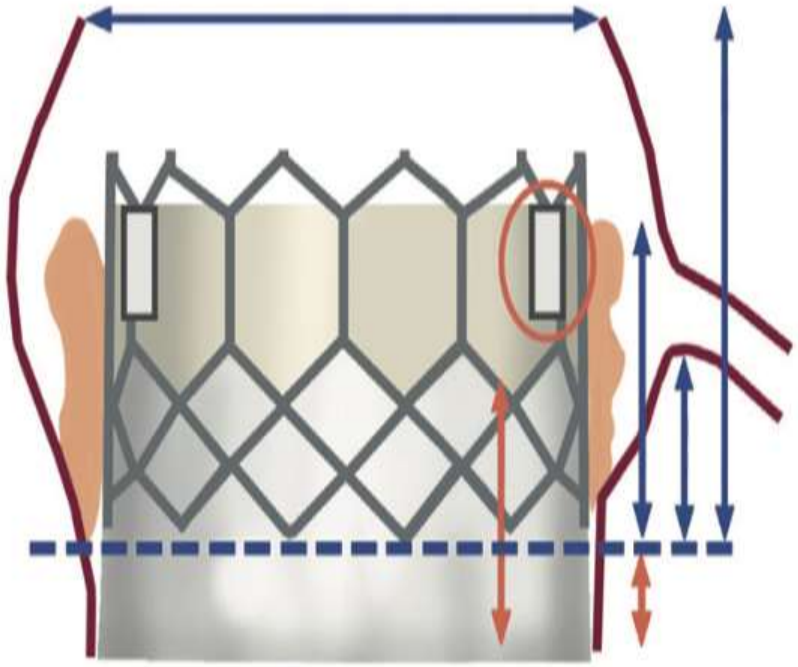
Self-Expanding Valve and Coronary Access if Ostia Lines up with Commissural Post



[1]Yudi, et al., *J Am Coll Cardiol* 2018; 71(12):1360–78

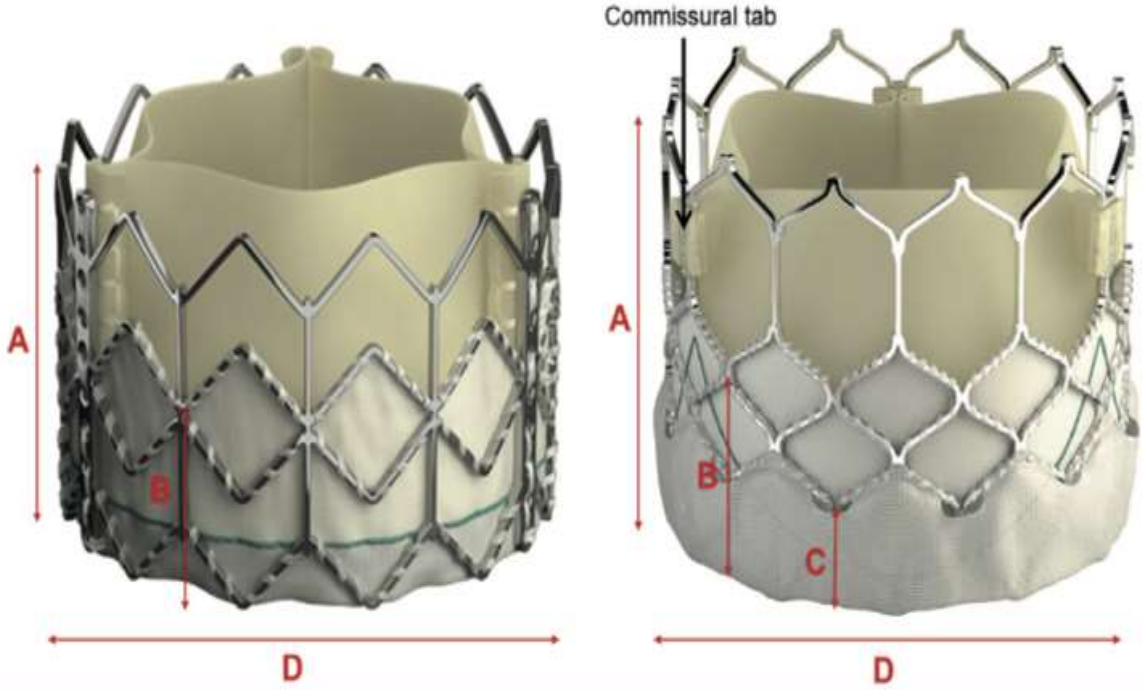
Reaccess to Coronaries: Considerations S3

[1]Yudi, et al., *J Am Coll Cardiol* 2018; 71(12):1360–78



Device and Procedural

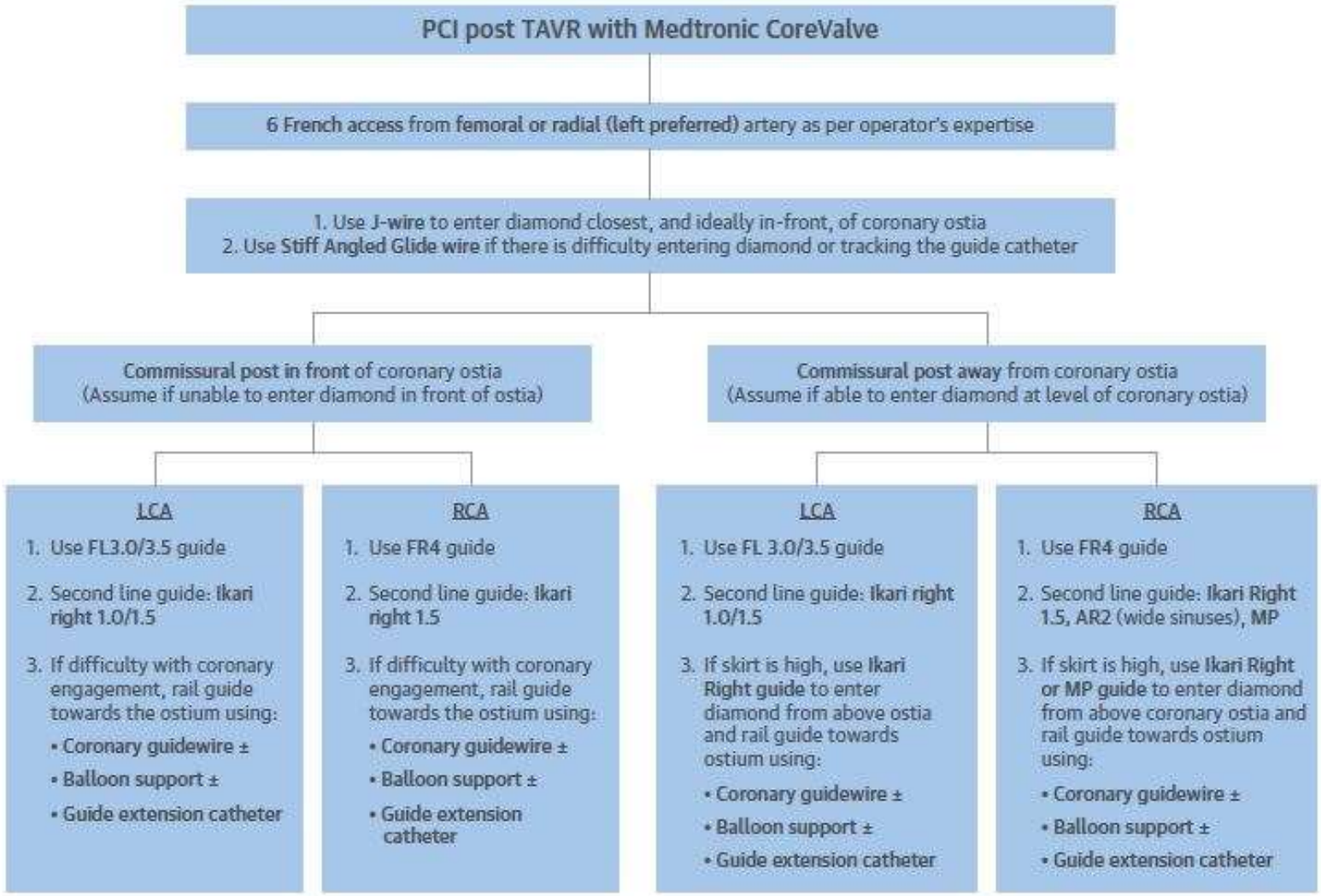
1. Commissural tab orientation
2. Sealing skirt height
3. Valve implant depth



	23 mm Sapien XT	26 mm Sapien XT	29 mm Sapien XT	20 mm Sapien 3	23 mm Sapien 3	26 mm Sapien 3	29 mm Sapien 3
A. Frame Height	14 mm	17 mm	19 mm	15.5 mm	18 mm	20 mm	22.5 mm
B. Inner Skirt Height	6.7 mm	8.7mm	11.6 mm	7.9 mm	9.3 mm	10.2 mm	11.6 mm
C. Outer Skirt Height	N/A	N/A	N/A	5.2 mm	6.6 mm	7.0 mm	8.1 mm
D. Valve Diameter	23 mm	26 mm	29 mm	20 mm	23 mm	26 mm	29 mm

Coronary PCI after TAVR with EvolutR

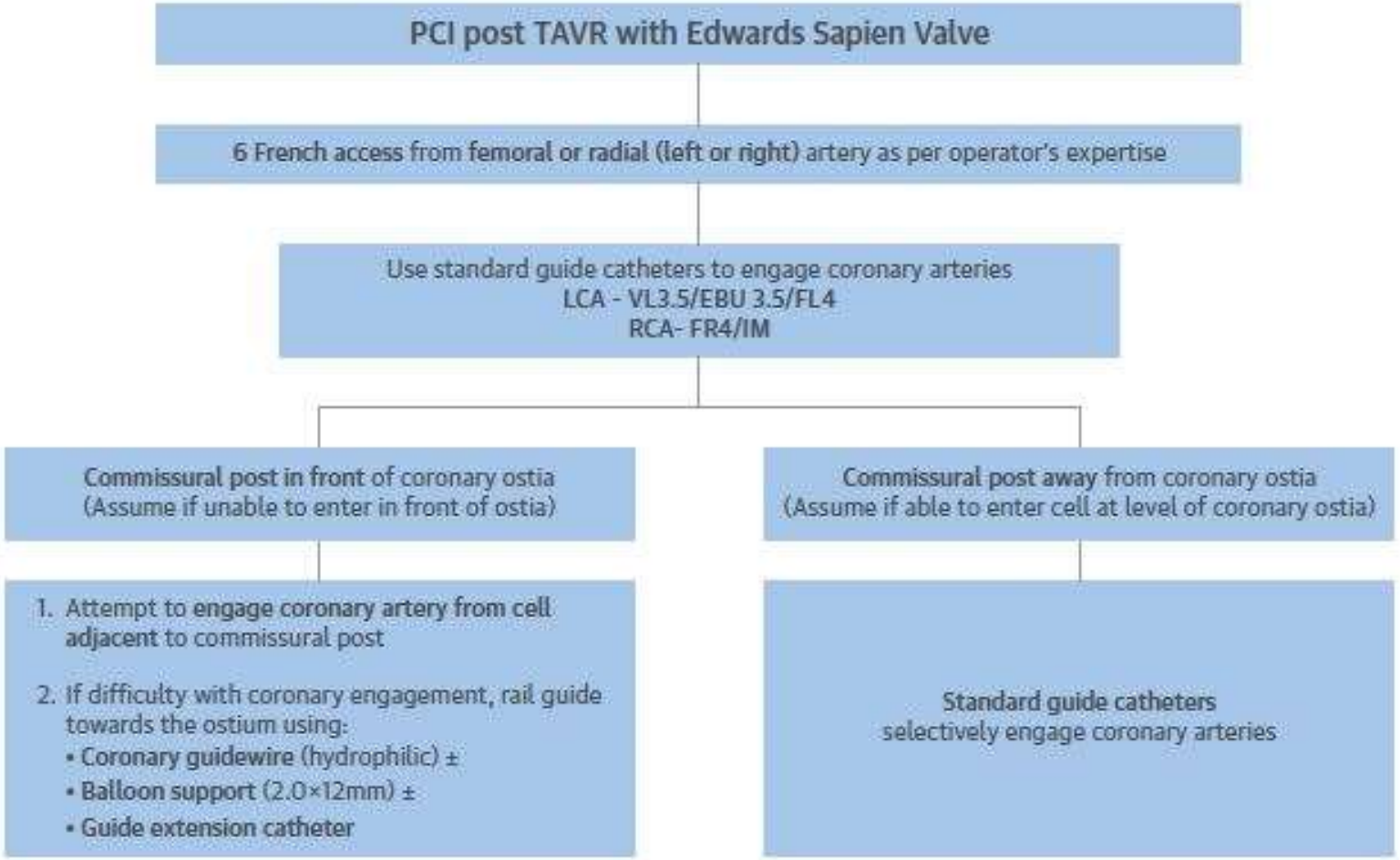
FIGURE 12 Algorithm on PCI Post-TAVR With a Self-Expanding Valve



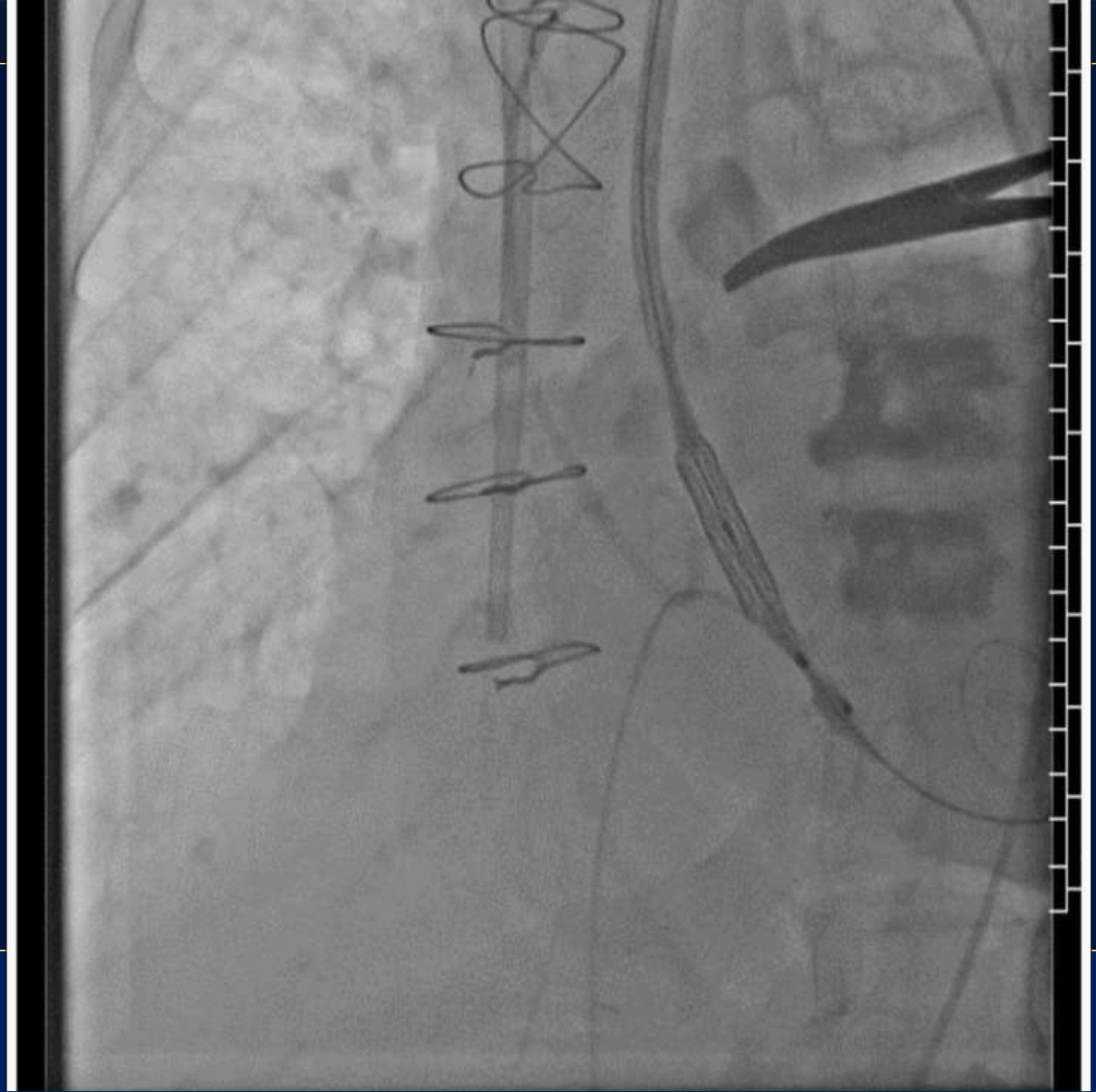
Recommendations on specific catheters used in PCI after CoreValve (Medtronic, Galway, Ireland) implantation are proposed. Abbreviations as in Figures 4, 10, and 11.

Coronary PCI after TAVR with S3

FIGURE 14 Algorithm on PCI Post-TAVR With a Balloon-Expandable Valve



Recommendations on specific catheters used in PCI after Sapien valve (Edwards Lifesciences, Irvine, California) implantation are proposed.
IM = internal mammary; other abbreviations as in Figures 4, 7, 10, and 13.



Summary

- ***Angiography and PCI in post TAVR patients has a high success with balloon expandable TAVRs***
- ***Standard catheters for S3 -- commissural TAB***
- ***For self-expanding TAV, reduce catheter size by 0.5mm and leave wire in coronary while retracting guide to avoid interaction with the prosthesis***
- ***Liberal use of guide-extenders***