

Coronary Access Post TAVR: TAVRCathAID

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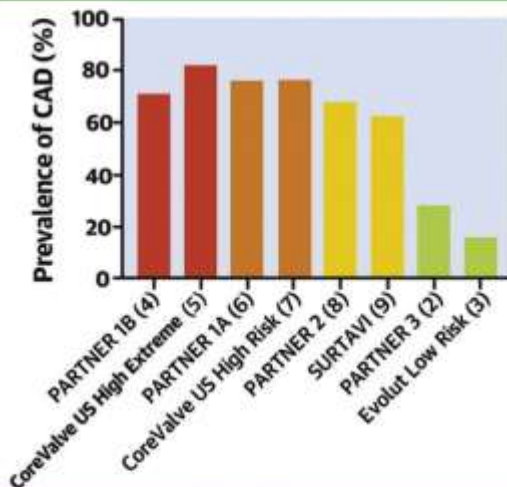
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CAD Management Before and After TAVR

CAD Management Before TAVR

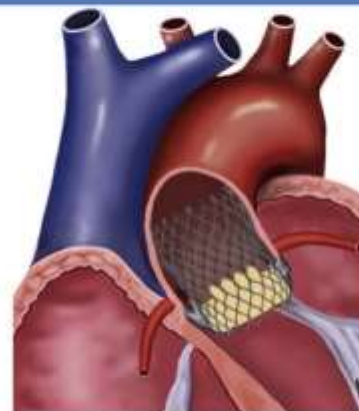
Prevalence of CAD in TAVR Recipients According to Surgical Risk



Future Perspectives

- CTA: Reasonable alternative to coronary angiography for the evaluation of CAD pre-TAVR
- FFR/iFR: Feasible and safe, promising preliminary results

CAD Management After TAVR

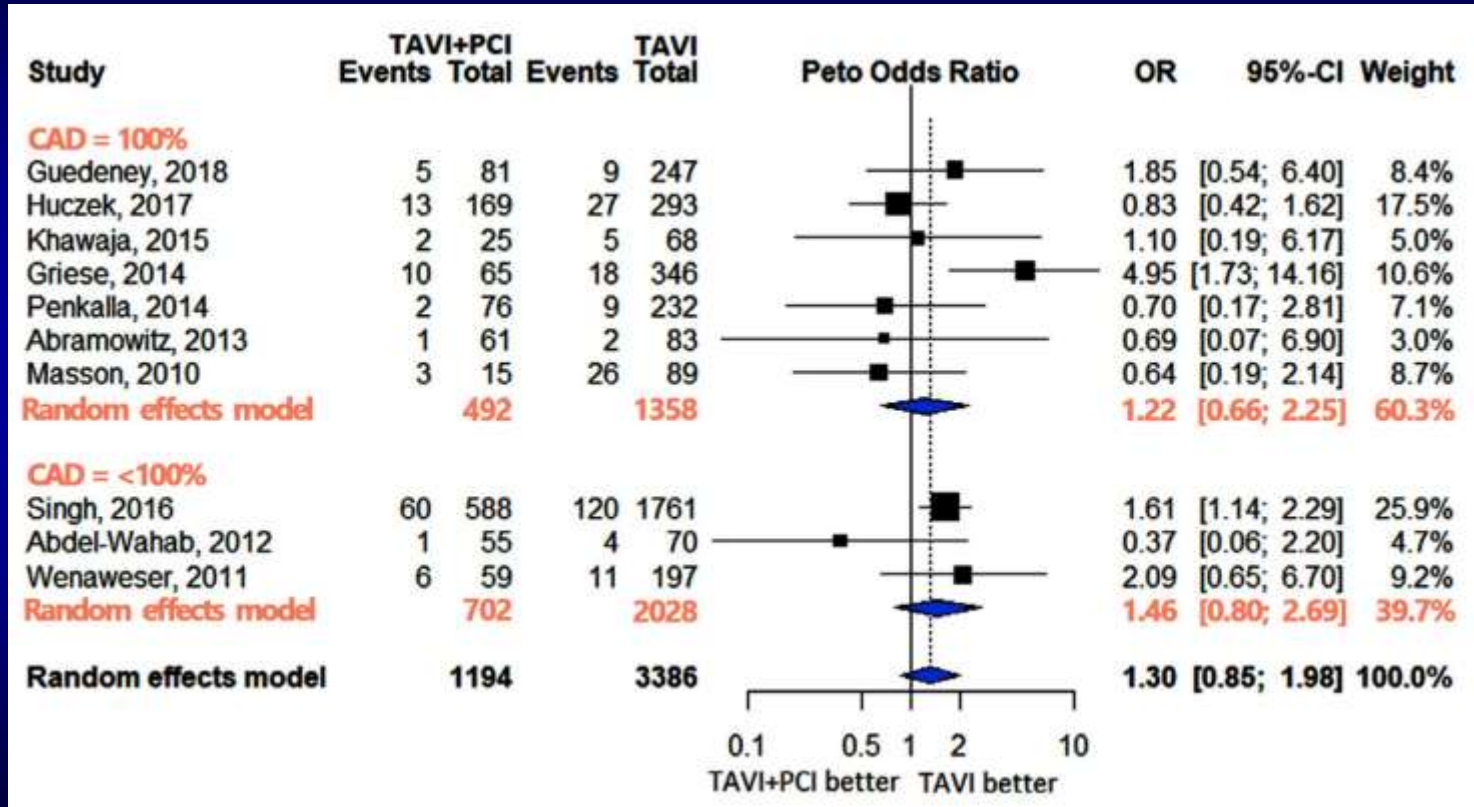


Coronary Access After TAVR

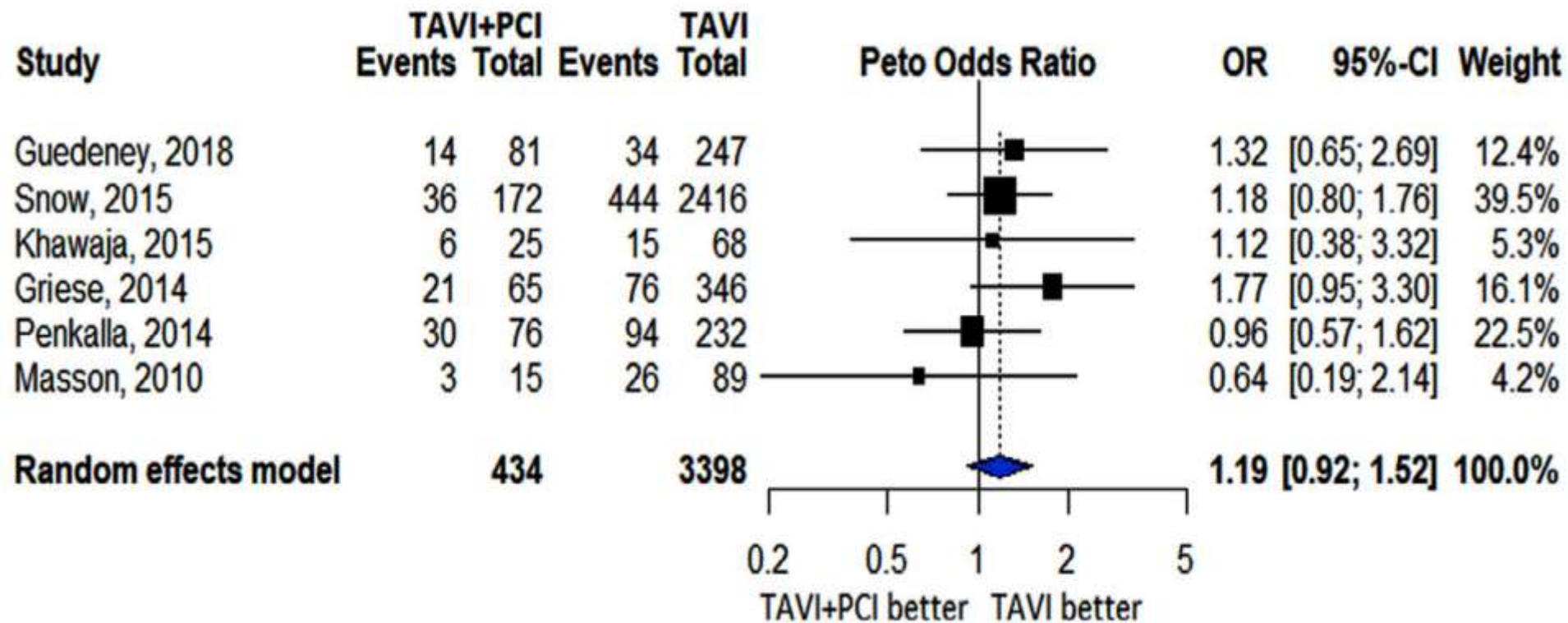
- No expected difficulties (in most cases) for coronary access (particularly valves with shorter stent frame/sealing skirt, larger stent cell size)
- Potential increased difficulties for coronary access (particularly RCA) in some cases (taller stent frame/sealing skirt, small sinus of Valsalva, low coronary height)

Poor Outcomes Associated With ACS Post-TAVR

Evaluating the Cumulative Risk of 30-Day All-Cause Mortality in Patients with TAVI and PCI vs TAVI Alone



Evaluating the Cumulative Risk of 1-Year All-Cause Mortality in Patients with TAVI and PCI vs TAVI Alone



Meta-Analysis Comparing Outcomes in Patients Undergoing Transcatheter Aortic Valve Implantation With Versus Without Percutaneous Coronary Intervention

In conclusion, our analysis indicates that PCI with TAVI in patients with severe aortic stenosis and concomitant CAD grants no additional clinical advantage in terms of patient important clinical outcomes. Further randomized studies are needed to better delineate the clinical practice for myocardial revascularization in patients receiving transcatheter therapy for aortic valve disease.

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COMPLETE TAVR: Study Design

SYMPTOMATIC AS PATIENTS with at least 1 coronary artery lesion in a vessel that is > 2.5 mm in diameter with a $\geq 70\%$ visual angiographic* stenosis AND Heart Team Consensus they are suitable for transfemoral TAVR

*CT and Angiographic Core Labs

SUCCESSFUL TF TAVR WITH A BALLOON EXPANDABLE THV

RANDOMIZATION within 24 hours
and Stratified for Intended Timing of PCI:

During initial hospitalization or after discharge (between 1 and 45 days post successful TF TAVR)

Exclusion Criteria: Intent to revascularize (PCI or CABG) or prior CABG or PCI within 90 days

COMPLETE REVASCULARIZATION
Staged PCI of all lesions with a goal of complete revascularization between 1 and 45 days post successful TF TAVR
N=2000

MEDICAL THERAPY
No revascularization, guideline-directed medical therapy alone
N=2000

Guideline-Directed Medical Therapy
ASA 81 mg + Clopidogrel OR Rivaroxaban 15 mg + Clopidogrel (if indication for NOAC)
x 1 year if complete revascularization; Statin, BB, ACE/ARB + Risk Factor Modification for all patients

MEDIAN FOLLOW-UP: 3 YEARS

PRIMARY OUTCOME: Composite of CV Death, New MI, Ischemia-Driven Revascularization, or Hospitalization for Unstable Angina or Heart Failure

SECONDARY OUTCOMES: Each component of the primary outcome taken separately, Angina Status, All-cause Mortality, Stroke, Cost-effectiveness, QOL, Bleeding, Contrast Associated Acute Kidney Injury, and Procedure Time for Staged PCI if randomized to Complete Revascularization

Coronary Access and PCI After TAVI With SAPIEN 3

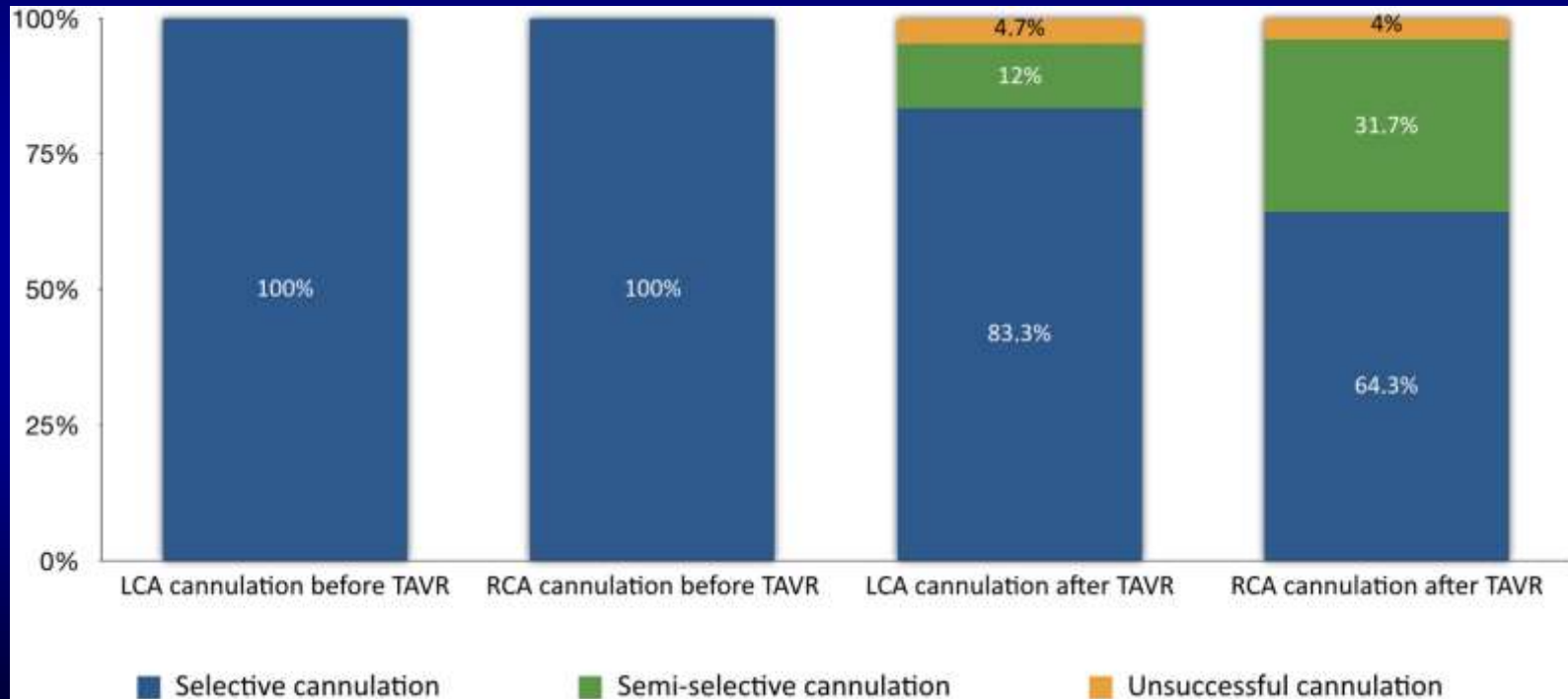
The SOURCE 3 European registry

- 1936 TAVI patients
- 68 (3.5%) had CA within 3 years
- History of CABG or PCI, PVD, MI, HTN and dyslipidemia
- CA was successful in 100% cases
- PCI was successful in 97.9%.

Variables	Coronary Access, N=68
Coronary access success,* n (%)	68 (100)
Death during reintervention related to coronary cause, n (%)	2 (2.9)
Time to coronary intervention, d, mean±SD	441±332.27
Action taken with coronary access, n (%)	
Diagnostic angiography	18 (26.5)
PCI with stent	42 (61.8)
PCI without stent	8 (11.8)
Reason for coronary access, n (%)	
Stable CAD	25 (36.8)
NSTEMI	18 (26.5)
STEMI	8 (11.8)
Dyspnea	2 (2.9)
Chest pain	2 (2.9)
Syncope	1 (1.5)
Patients with PCI, n (%)	
Vessels treated, n, mean±SD	1.1±0.27
Vessels treated, n (%)	
0	18 (26.5)
1	46 (67.6)
2	4 (5.9)
Cardiogenic shock, n (%)	2 (2.9)

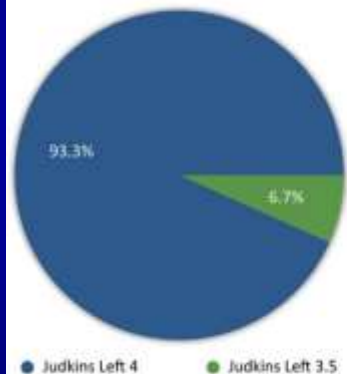
Coronary Cannulation After TAVR: The RE-ACCESS Study

300 patients – all available devices: 23 (7.7%) unsuccessful cannulations

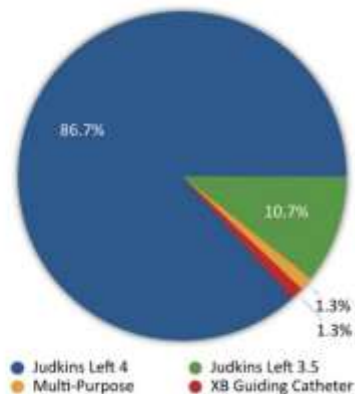


Catheters Used for LCA and RCA Cannulation Before and After TAVR

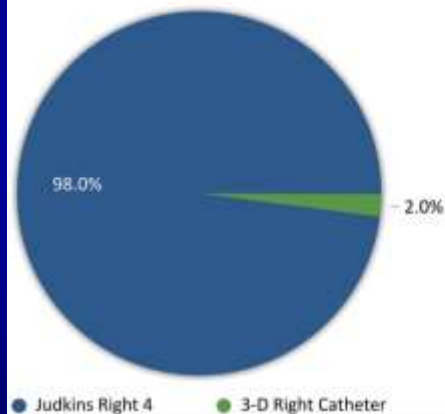
Catheters for LCA cannulation before TAVR



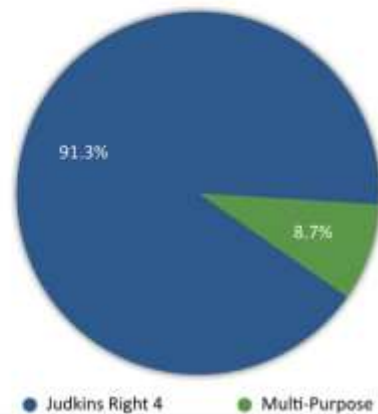
Catheters for LCA cannulation after TAVR



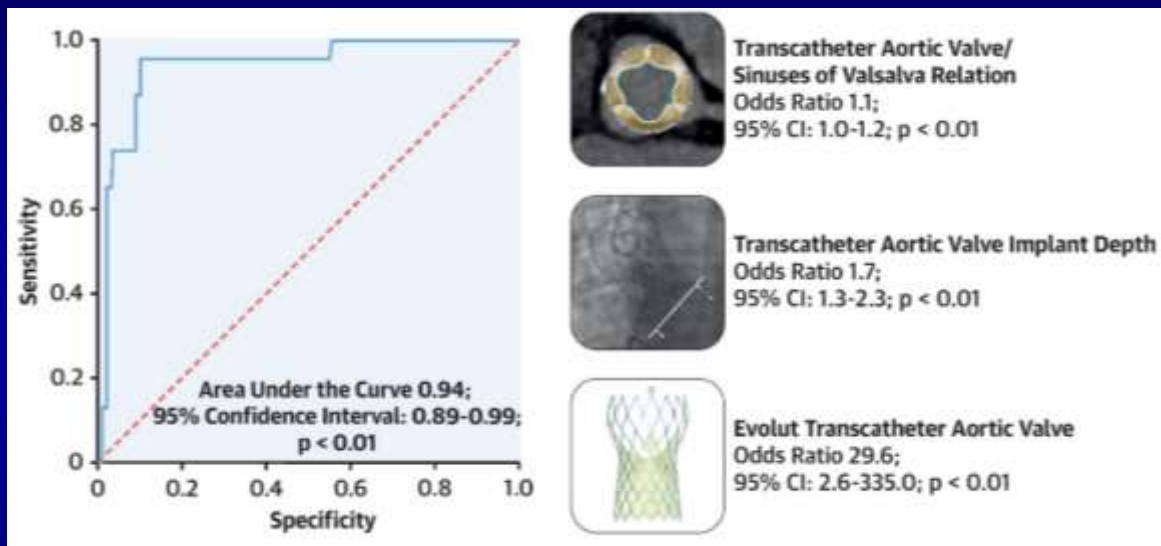
Catheters for RCA cannulation before TAVR



Catheters for RCA cannulation after TAVR



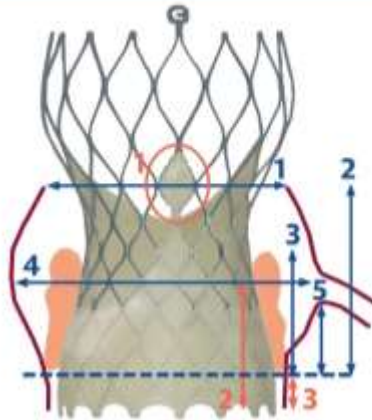
Predictors of Unsuccessful Coronary Cannulation After TAVR



	Univariate Analysis	p Value	Multivariate Analysis	p Value
TAV-SoV relation	1.2 (1.1-1.3)	<0.01	1.1 (1.0-1.2)	<0.01
Mean TAV implantation depth	1.2 (1.0-1.4)	0.05	1.7 (1.3-2.3)	<0.01
Evolut TAV	38.3 (5.1-288.7)	0.01	29.6 (2.6-335.0)	<0.01
LM ostium height	0.9 (0.7-1.0)	0.16		
RCA ostium height	0.9 (0.8-1.1)	0.26		

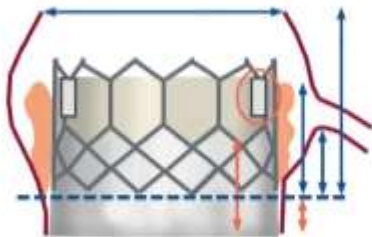
Coronary Angiography and PCI After TAVR

Factors Impacting Coronary Access



Anatomical

1. Sinotubular junction dimensions
2. Sinus height
3. Leaflet length and bulkiness
4. Sinus of Valsalva width
5. Coronary height



Device and Procedural

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

Imaging Evaluation

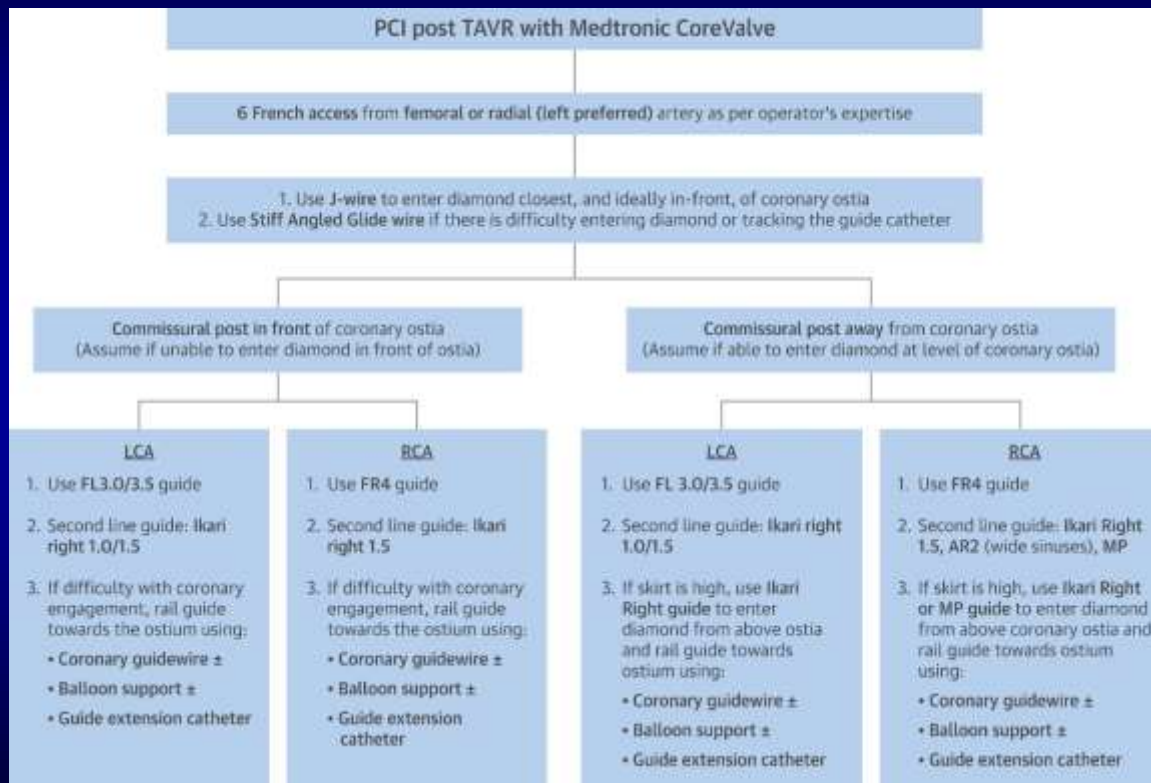
Fluoroscopy



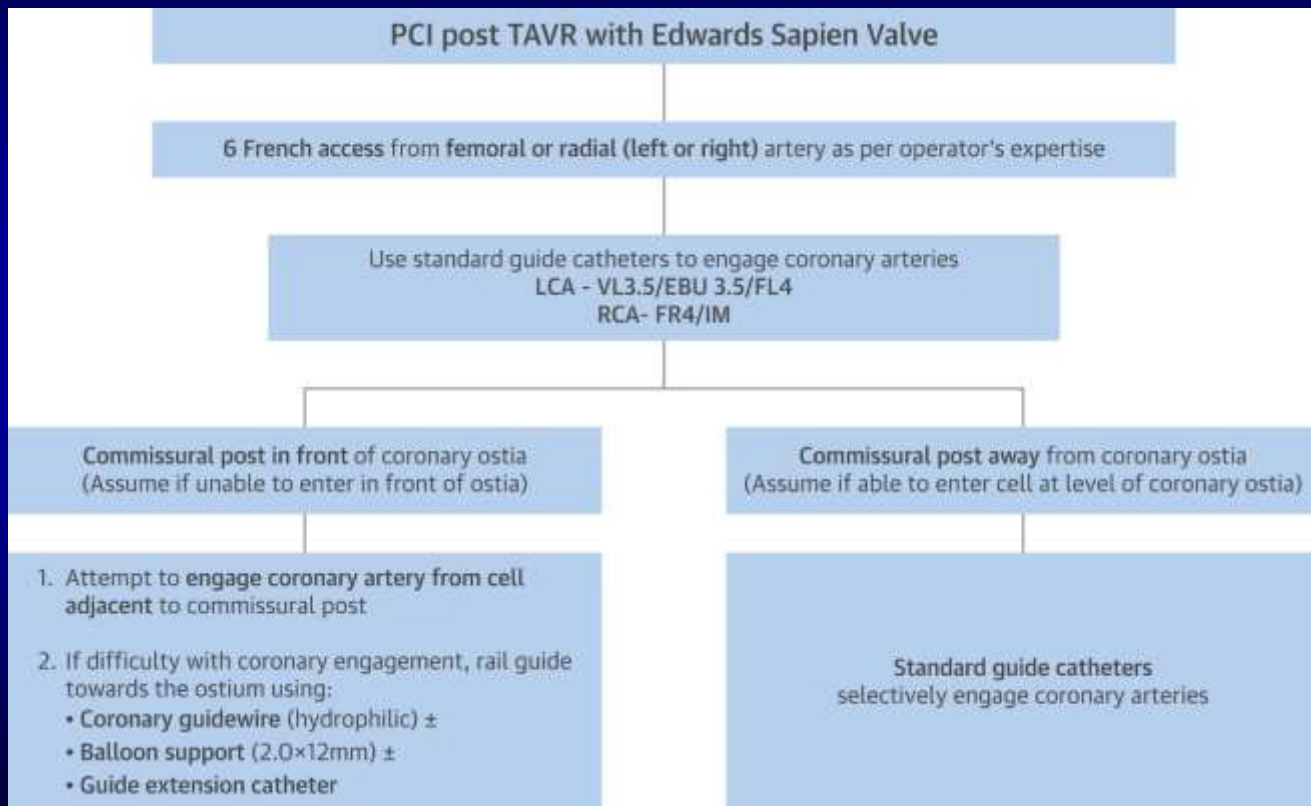
MDCT



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



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



TAVRcathAID



**Free
Download**



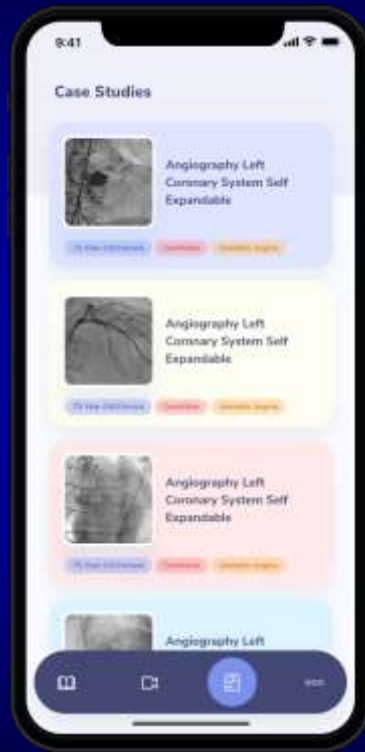
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The New TAVRcathAID

- **Features**
 - **Added case reviews**
 - Offline functionality
 - Updated user interface
 - Powerful search function
 - 8 detailed animations
 - Fully-featured WebApp



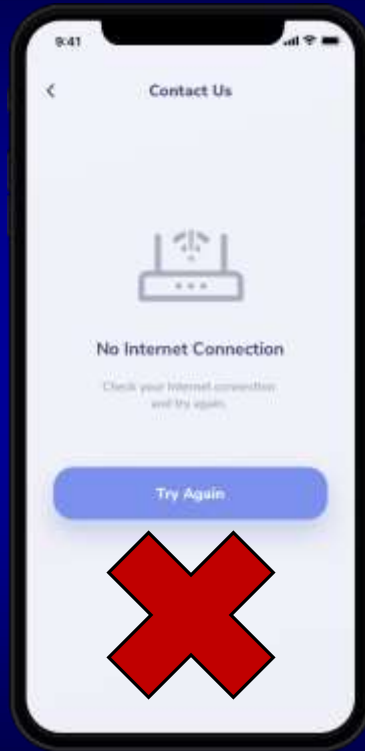
Eight detailed case reviews show how coronary access was achieved in patients after TAVR.

Guide catheter escalation if required, guide extension catheter use, as well as the proceeding diagnostic catheterization or intervention.

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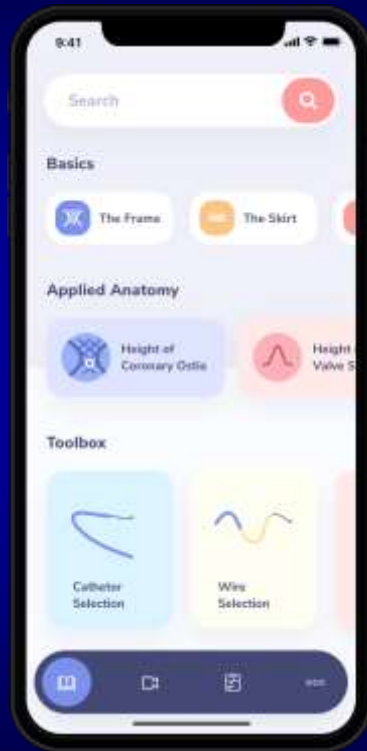


Whether you are in a shielded cath lab, airplane, or underwater tunnel, the application works without a hitch.

100% offline functionality, text, images, and videos.

The New TAVRcathAID

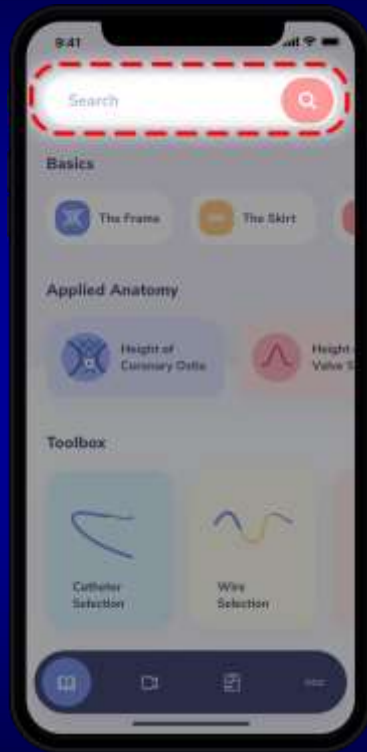
- **Features**
- Added case reviews
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The user interface was re-designed **from the ground up** to bring all of the new and old features **one or two presses away** without getting lost in a maze of menus.

The New TAVRcathAID

- **Features**
 - Added case reviews
 - Offline functionality
 - Updated user interface
 - **Powerful search function**
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An **application-wide search** has been introduced that will find your term of interest inside of the educational sections or case reviews and **take you right there** without having to spend any time manually looking.

The New TAVRcathAID

- **Features**

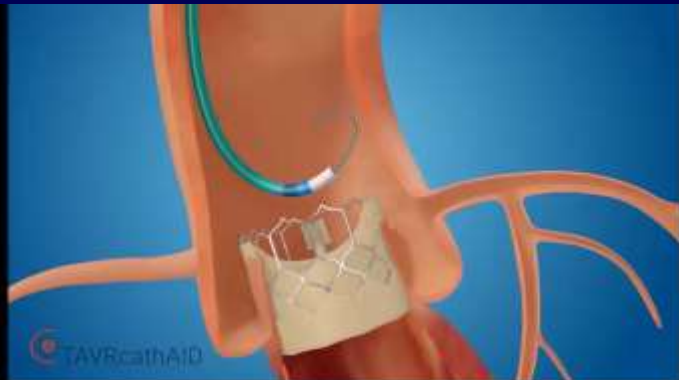
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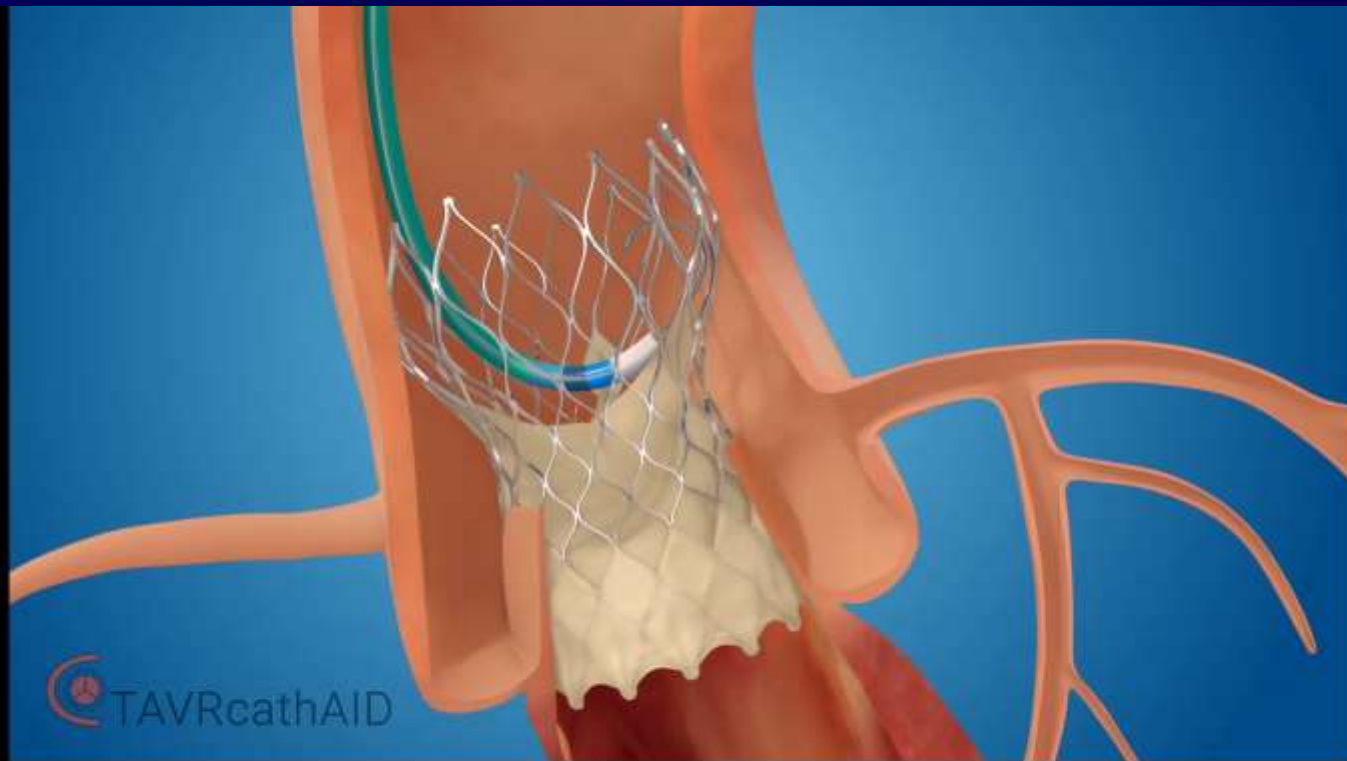
Take the eight high quality coronary reaccess animations **anywhere**.

Includes right and left **cath**, as well as **PCI** with commissural posts in front and away from the coronary ostium.

TAVRcathAID Animations



TAVRcathAID Animations

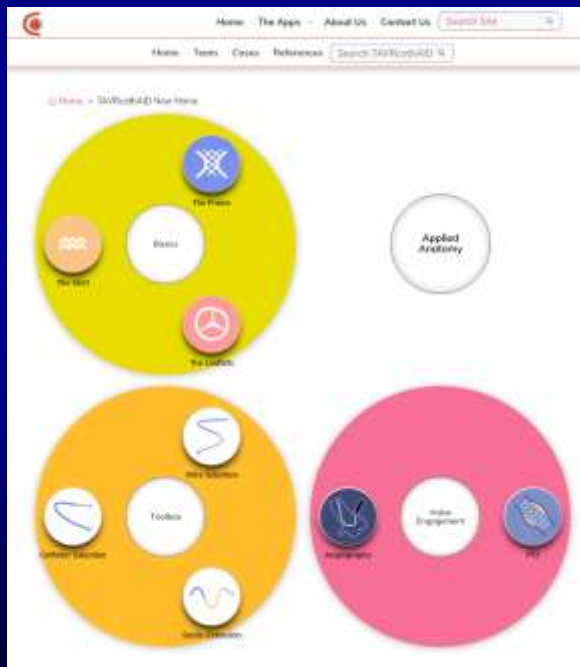


The New TAVRcathAID

• Features

All features available within the app are also available on the WebApp www.CardiologyApps.com/TAVRcathAID

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