

Keio University



Initial experience of TAVI in Japan

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8th, August 2014, TAVI summit, Seoul

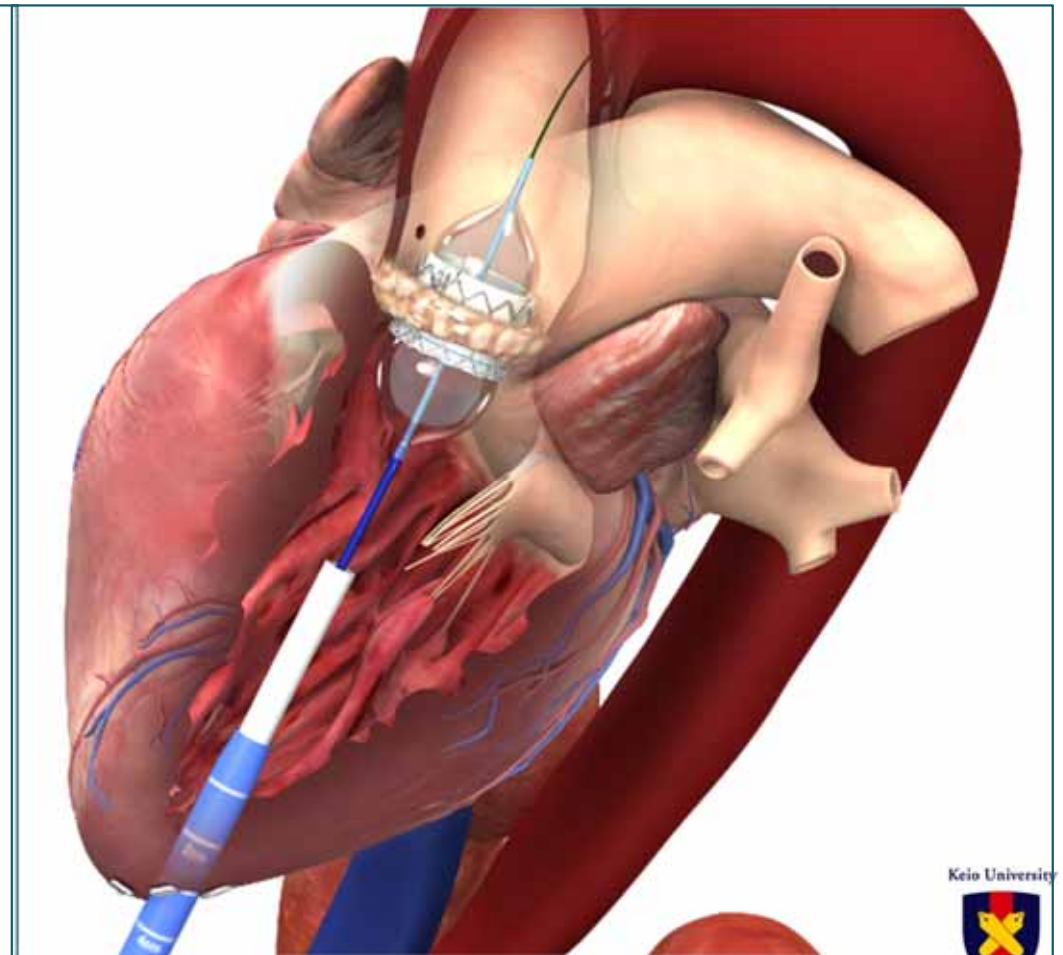
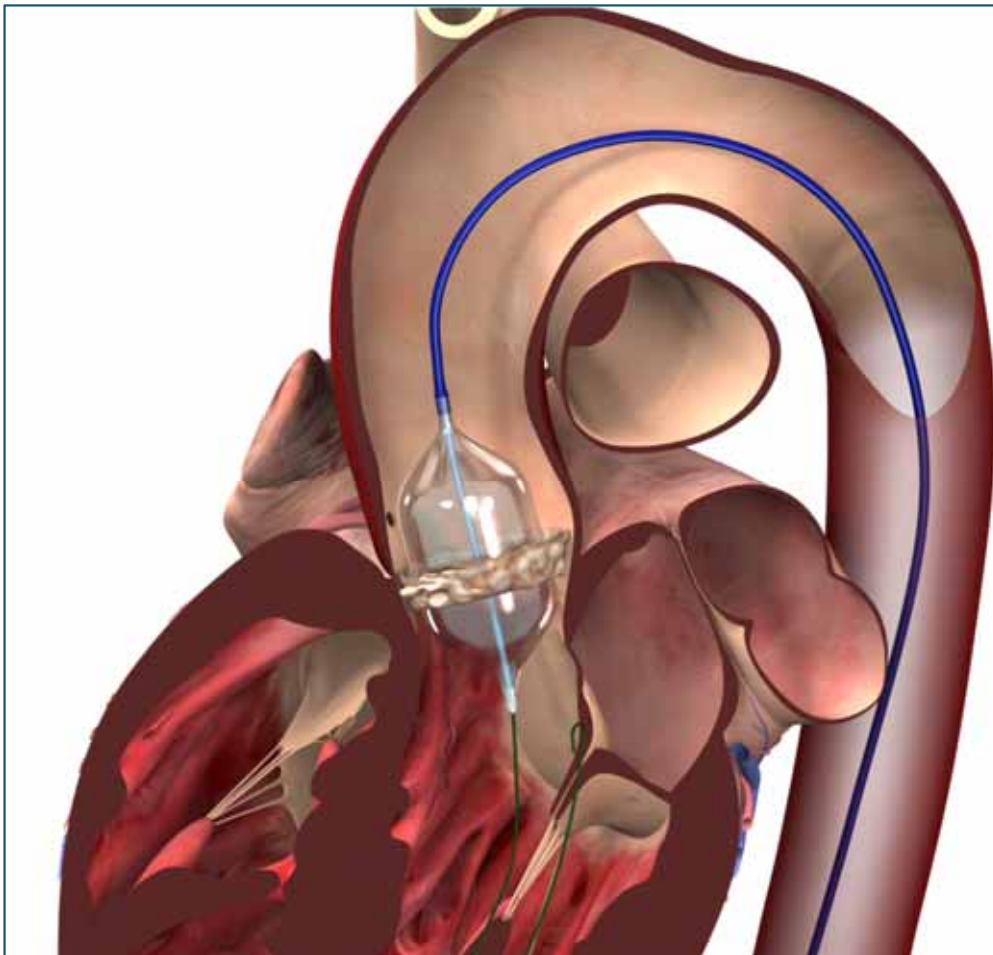
Disclosure

A clinical proctor for Edwards Lifesciences

Approaches for Sapien XT

TF, transfemoral

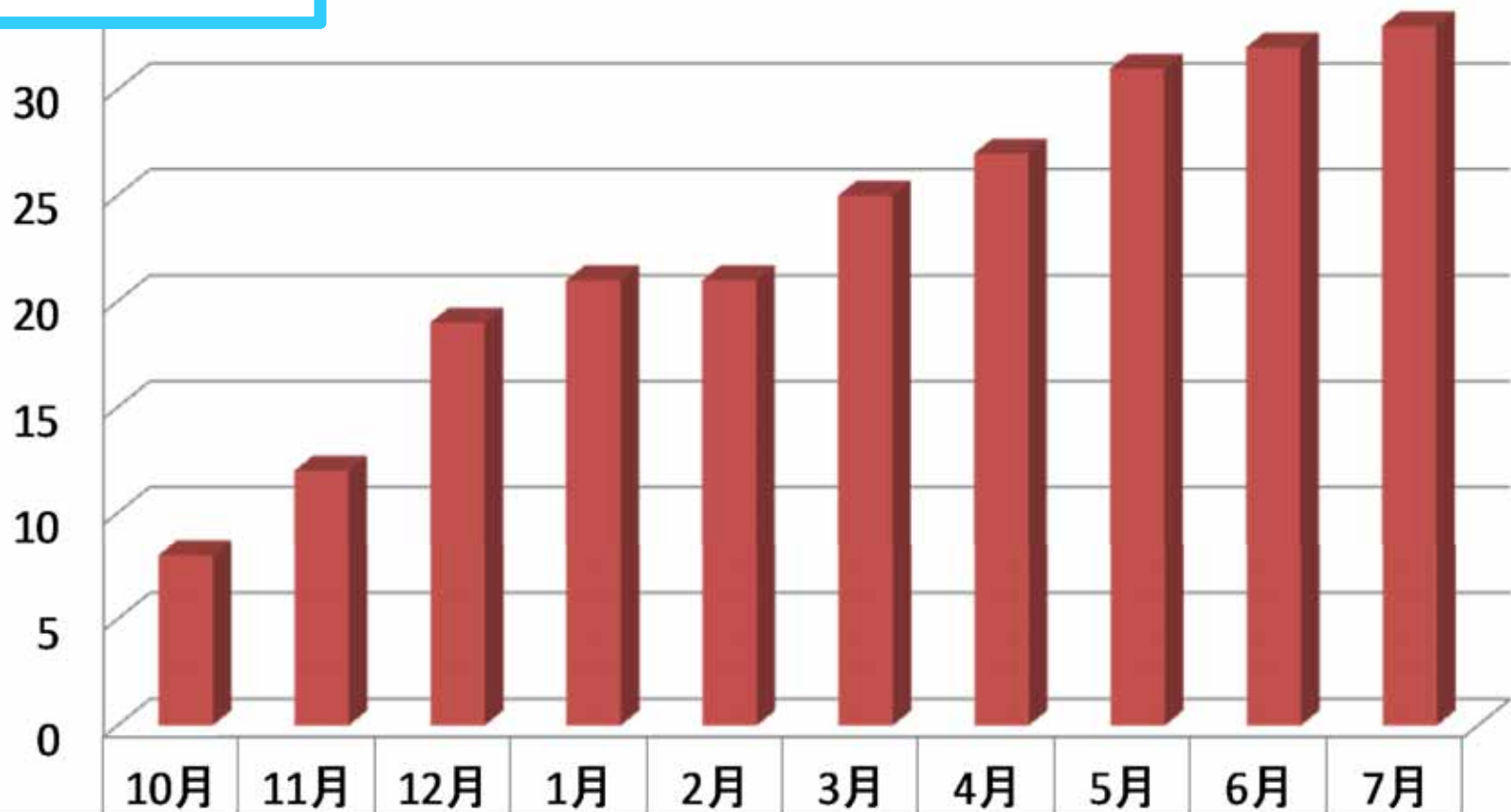
TA, transapical



TAVI centers (Oct 2013-July 2014)

認定施設数

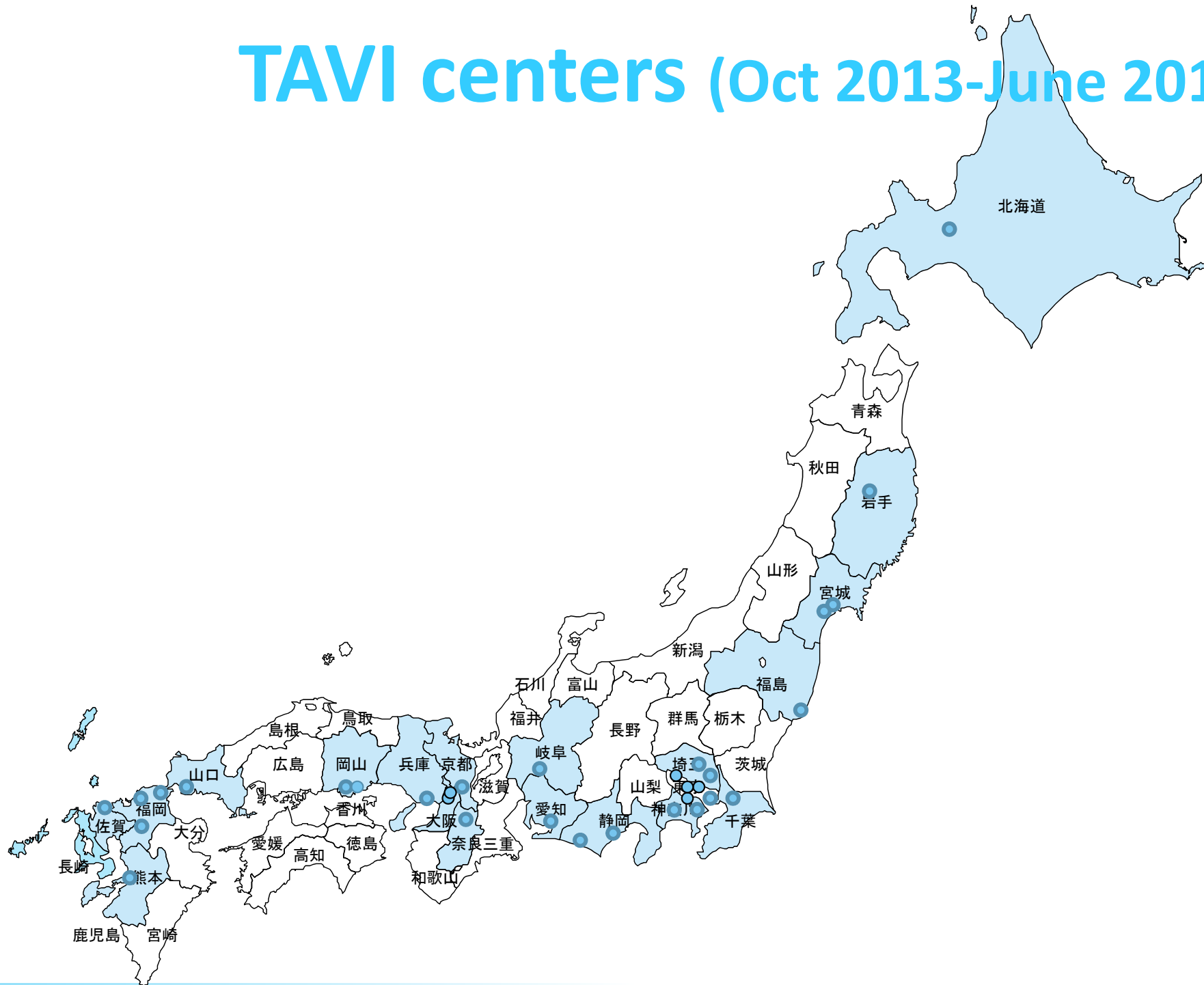
33 centers



■ 認定施設数

8 12 19 21 21 25 27 31 32 33

TAVI centers (Oct 2013-June 2014)



TAVI cases (Oct 2013-July 2014)

>600 cases

症例数

600
500
400
300
200
100
0

10月 11月 12月 1月 2月 3月 4月 5月 6月 7月

■ 症例数

30 61 93 144 200 263 335 410 507 602

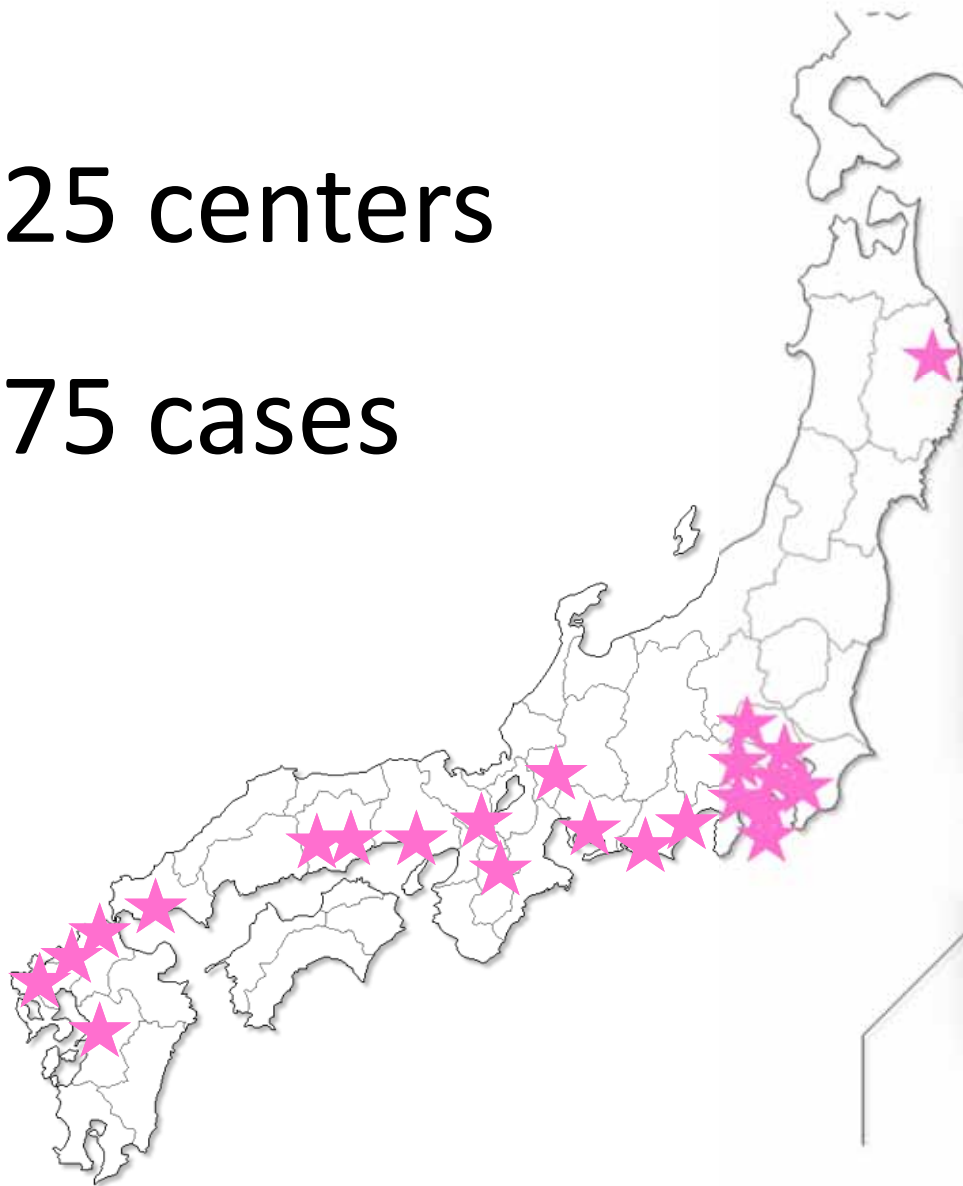
TAVI cases (Oct 2013-June 2014)

TF	TA
<i>30-day mortality = 1%!</i>	
23mm	26mm
69%	31%

Initial experience of proctoring

>25 centers

>75 cases

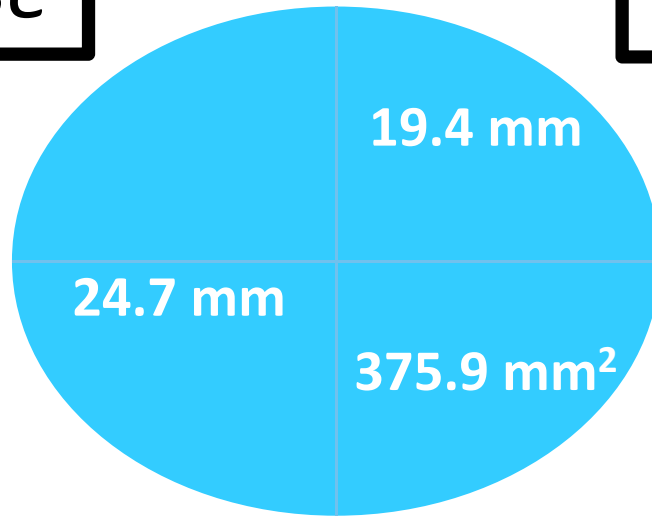


Comparison Japanese vs. French

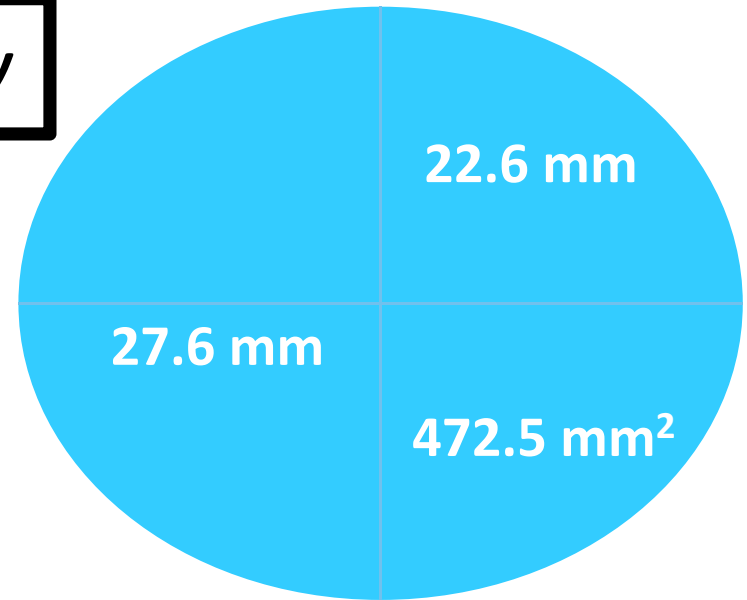
	Japanese	Massy	p value
Patient number	90	181	
Age	85 (82 - 87)	84 (81 - 88)	0.83
Male, %	23 (25.6%)	101 (55.8%)	<0.01
Height, cm	147.6 ± 9.5	164.2 ± 8.4	<0.01
Weight, kg	49.0 ± 8.1	69.8 ± 13.2	<0.01
Body surface area, mm²	1.40 ± 0.15	1.76 ± 0.19	<0.01

CT Characteristics

Japanese

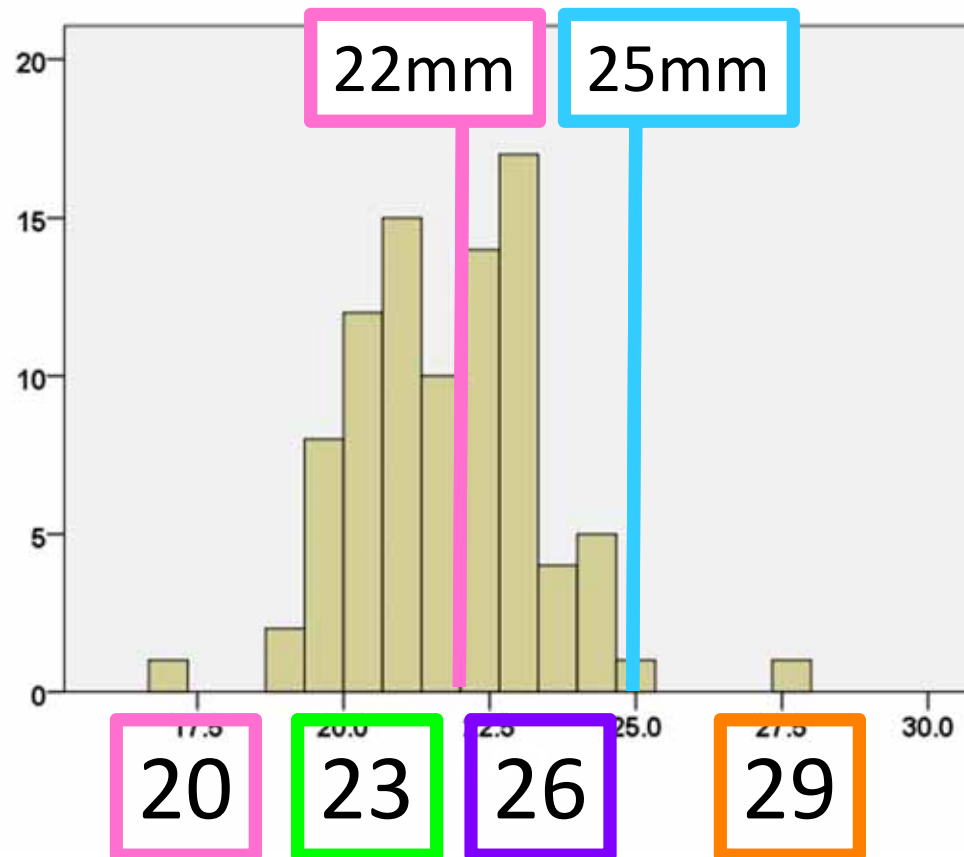


Massy

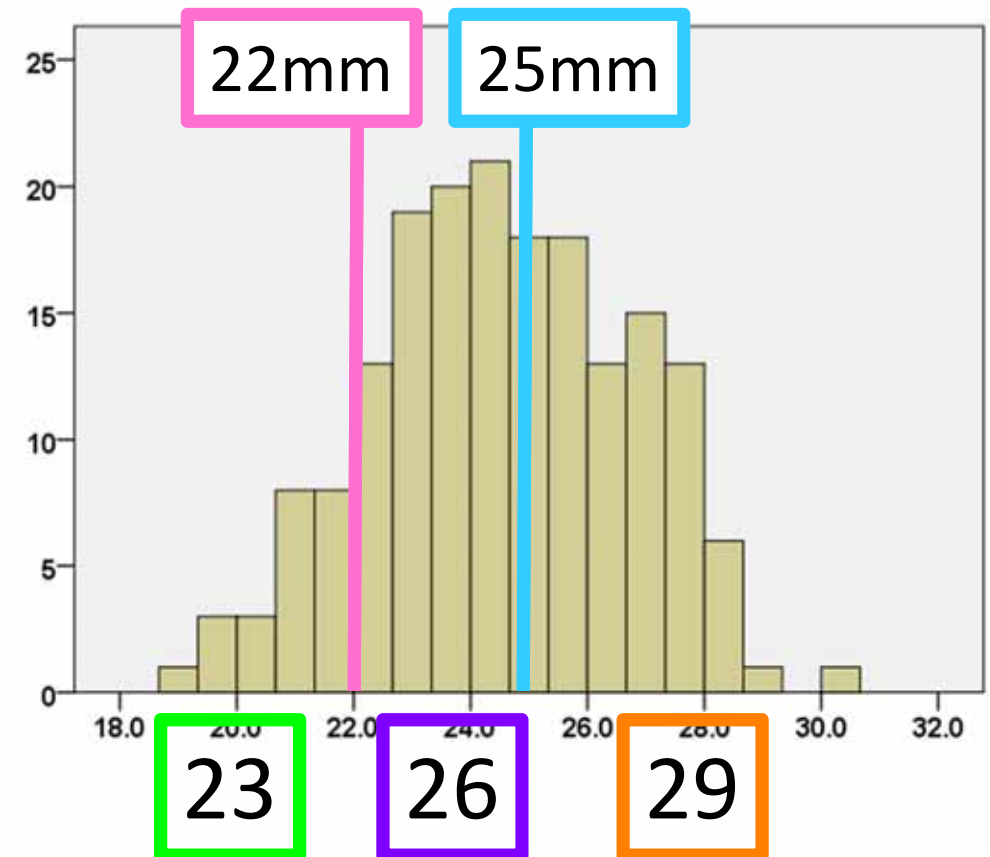


	Japanese	Massy	p value
Patient number	90	181	
sDiam, mm	19.4 ± 2.0	22.6 ± 2.3	<0.01
lDiam, mm	24.7 ± 1.9	27.6 ± 2.5	<0.01
Eccentric index	21.5 ± 6.2	18.9 ± 5.3	<0.01
Perimeter, mm	70.3 ± 5.0	80.4 ± 7.0	<0.01
CAAD (perimeter derived), mm	22.4 ± 1.6	25.6 ± 2.2	<0.01
Area, mm²	375.9	472.5	<0.01
	(333.8 - 410.7)	(415.3 - 536.6)	
CAAD (area derived), mm	21.8 ± 1.6	24.5 ± 2.2	<0.01

Distribution of annulus diameter

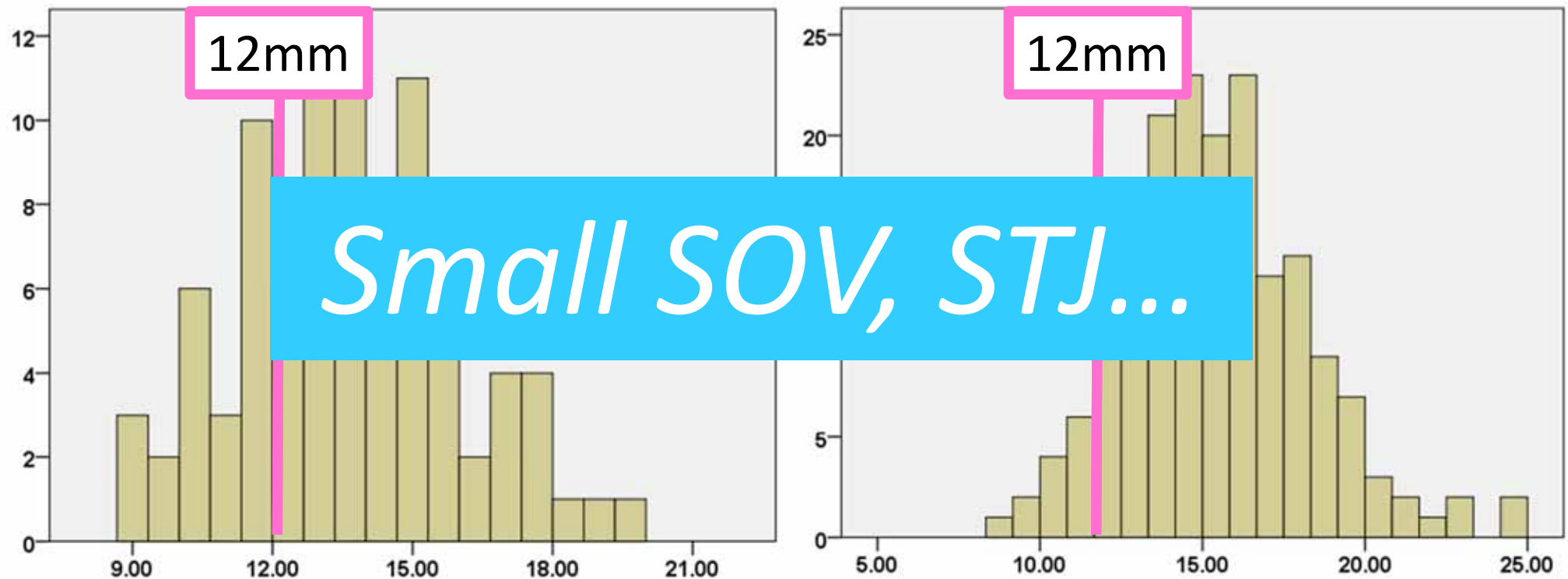


Japanese
90 cases



Massy
181 cases

Distribution of Left coronary height



Japanese

Massy

Predictive Factors, Management, and Clinical Outcomes of Coronary Obstruction Following Transcatheter Aortic Valve Implantation

Insights From a Large Multicenter Registry

	Coronary obstruction N= 27	Controls N= 27	OR (95% CI)	P value
Aortic SOV diameter, mm	28.3 ± 0.8	31.3 ± 0.6	1.37 (1.13–1.66)	0.011
Relation SOV/annulus	1.26 ± 0.04	1.34 ± 0.03	20.0 (1.28–333)	0.003
Left coronary height, mm	10.7 ± 0.4	13.3 ± 0.3	2.17 (1.62–2.90)	<0.001
Right coronary height, mm	12.7 ± 0.8	14.2 ± 0.4	1.36 (1.10–1.68)	0.047

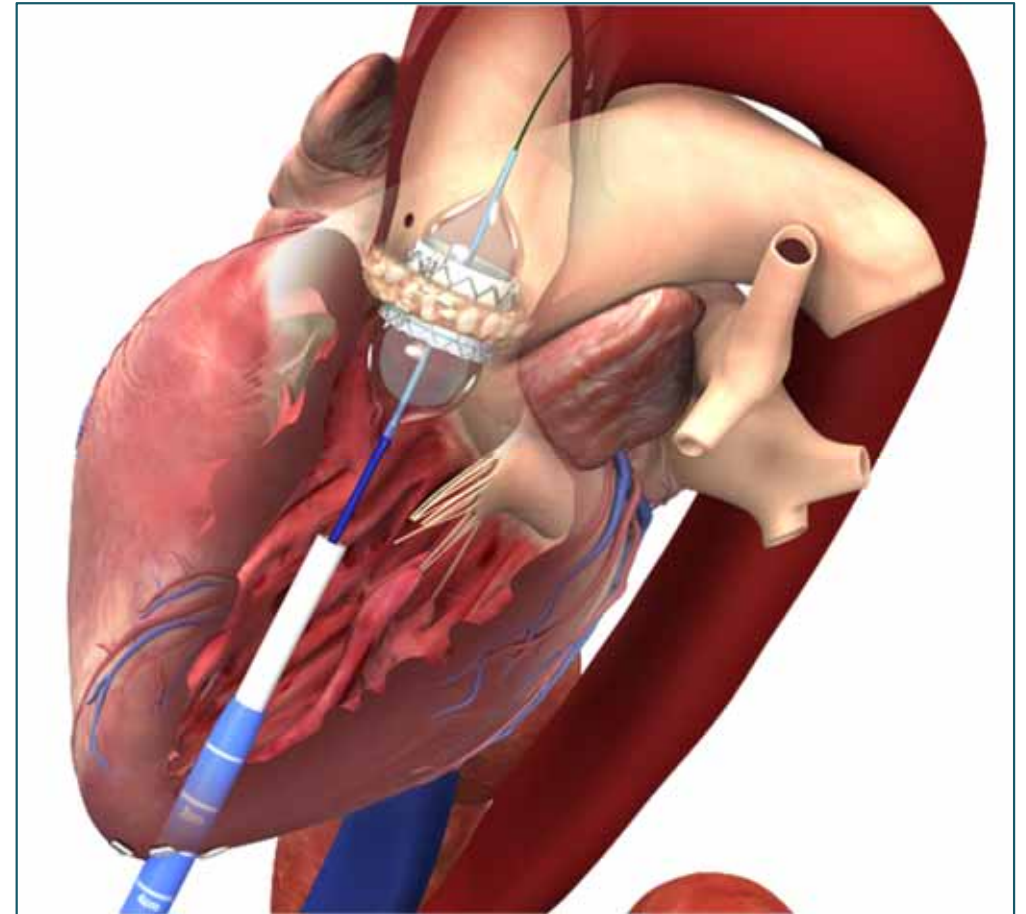
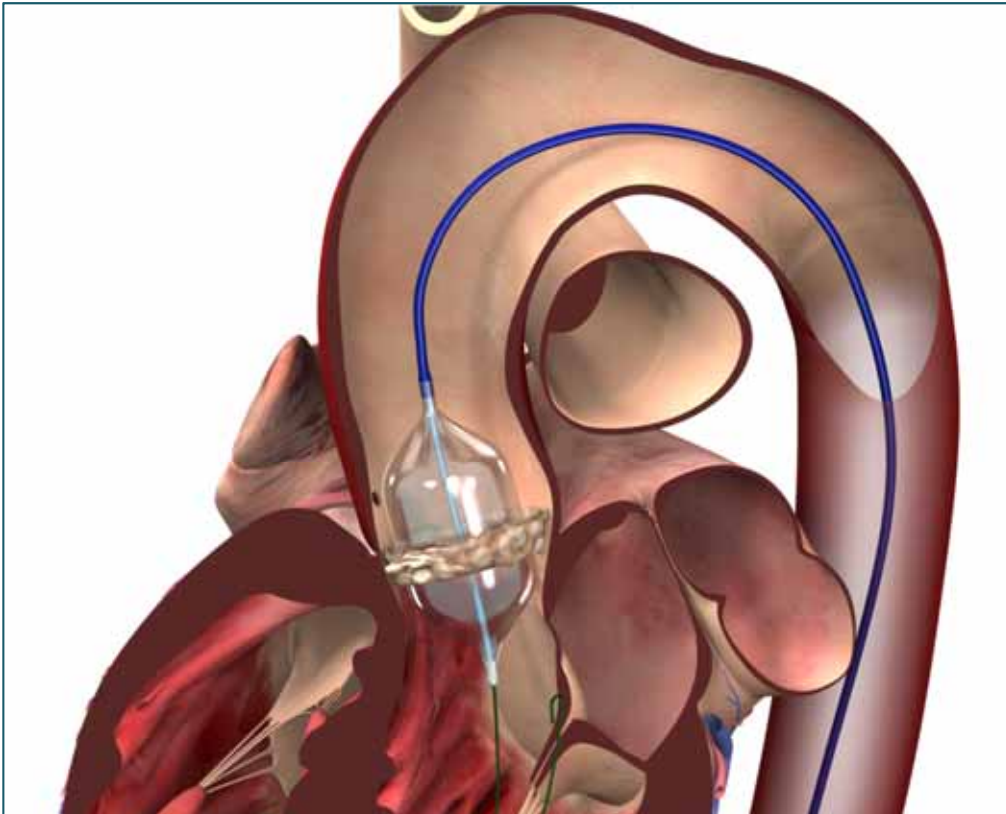
Risk of coronary occlusion

	Japanese	Massy	p value
Patient number	90	181	
Aortic SOV diameter < 28.3 mm	60 (66.7%)	17 (13.9%)	<0.01
Relation SOV/ CAAD < 1.26	43 (47.8%)	41 (33.6%)	0.04
Left coronary height < 10.7 mm	12 (13.3%)	7 (3.9%)	<0.01
Right coronary height < 12.7 mm	7 (7.8%)	4 (2.2%)	0.03

Keio experience

TF: 50 cases

TA: 9 cases

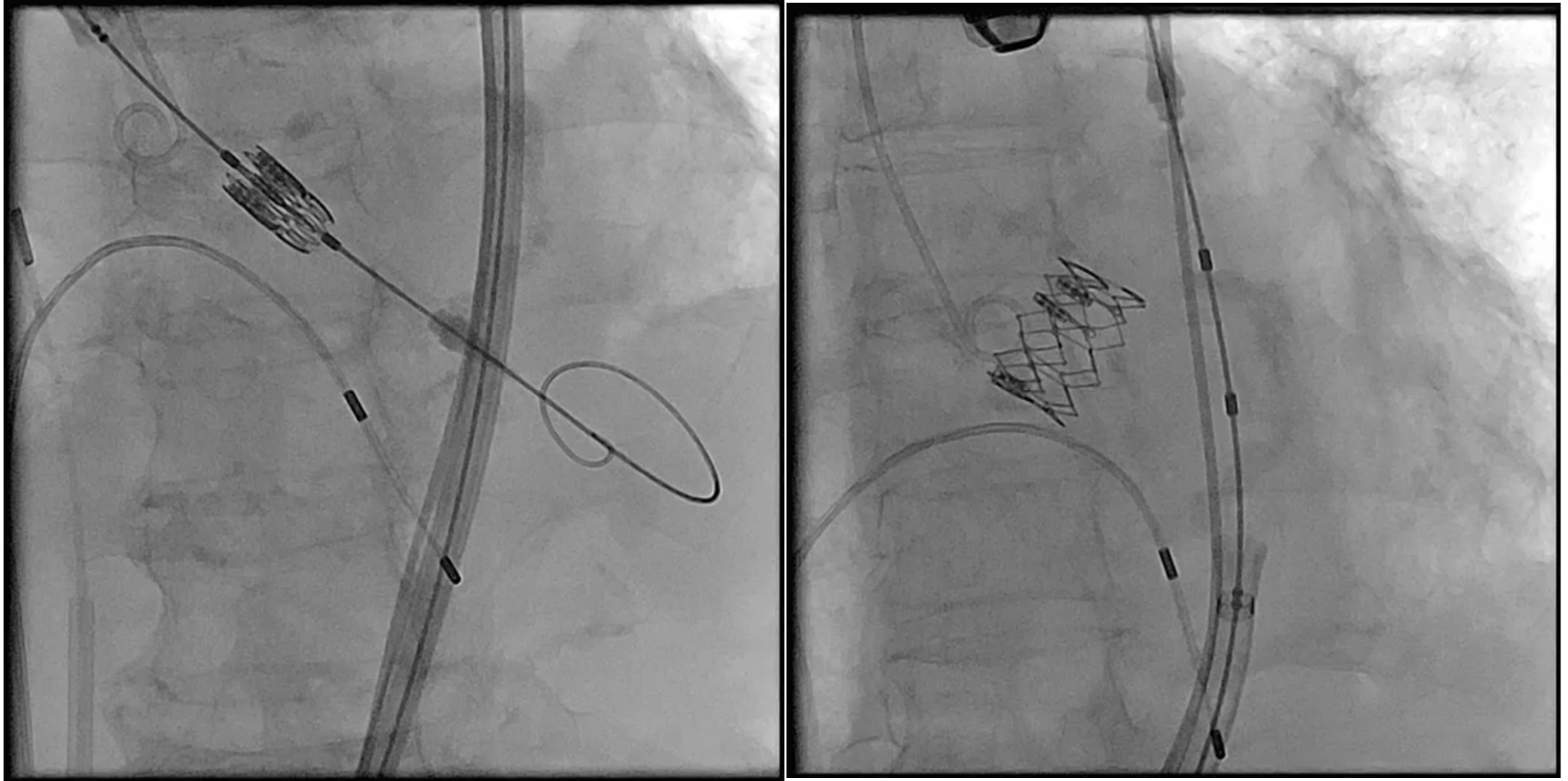


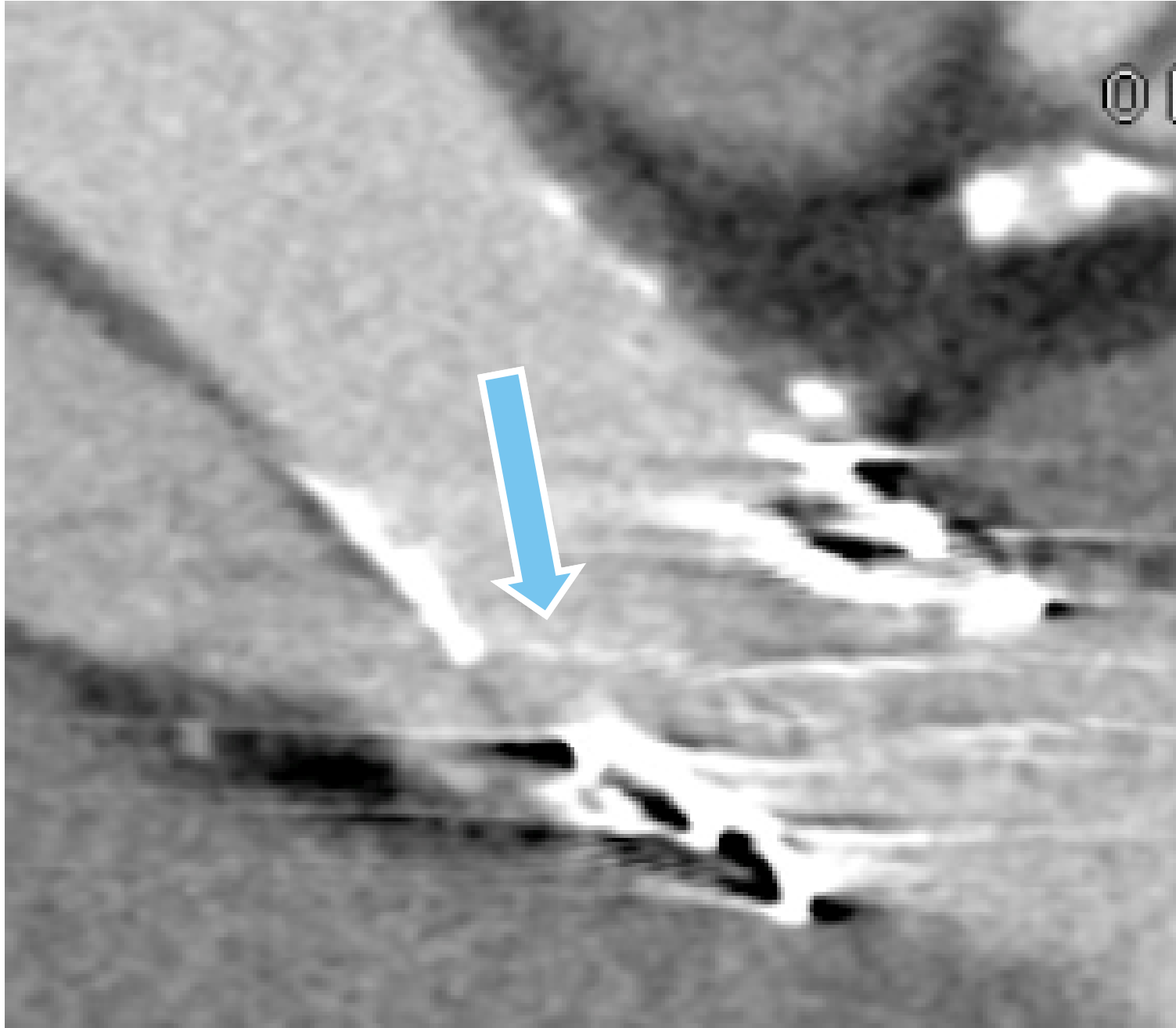
Puncture: 28 cases
Local anesthesia: 6 cases

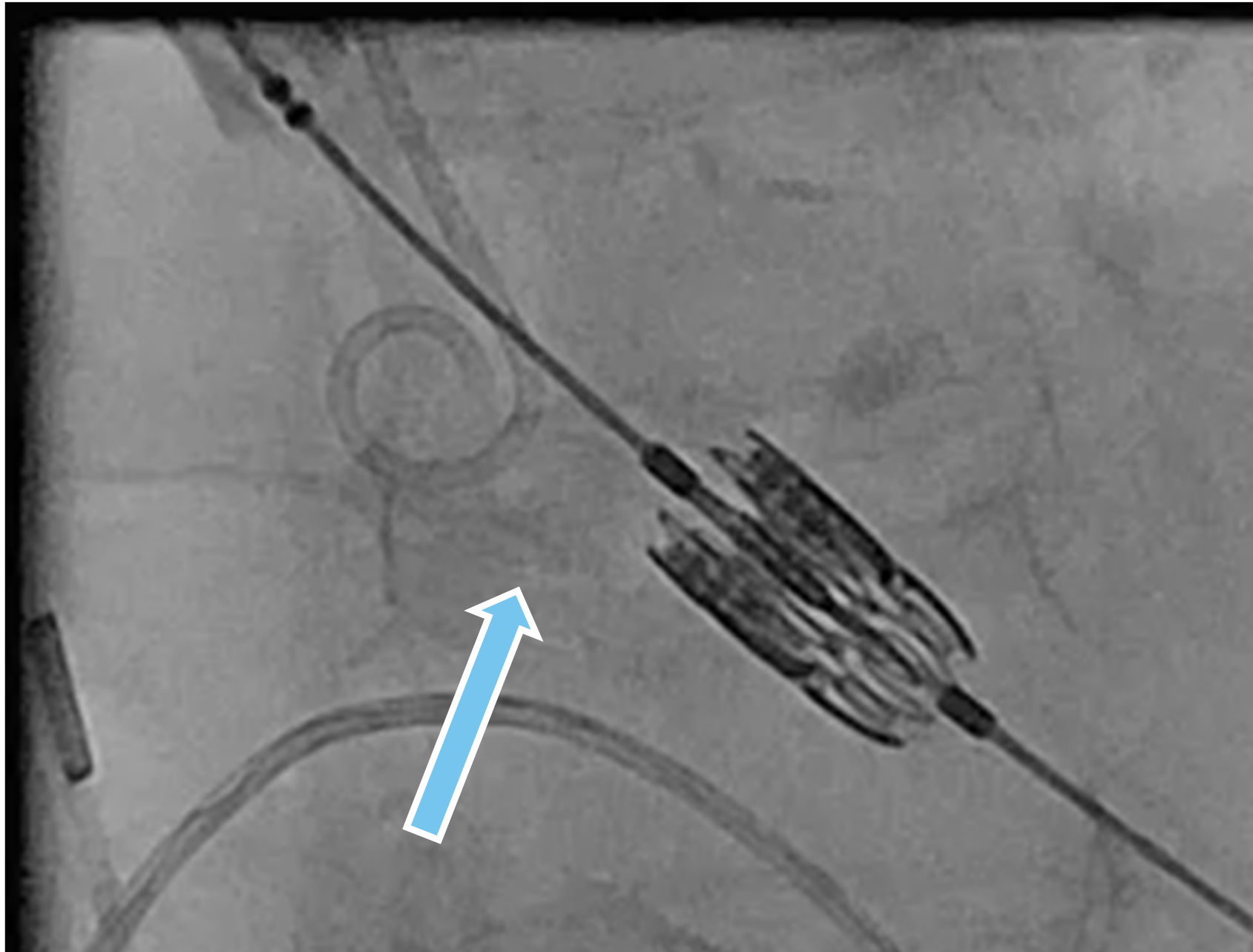
Keio experience (Oct 2013~)

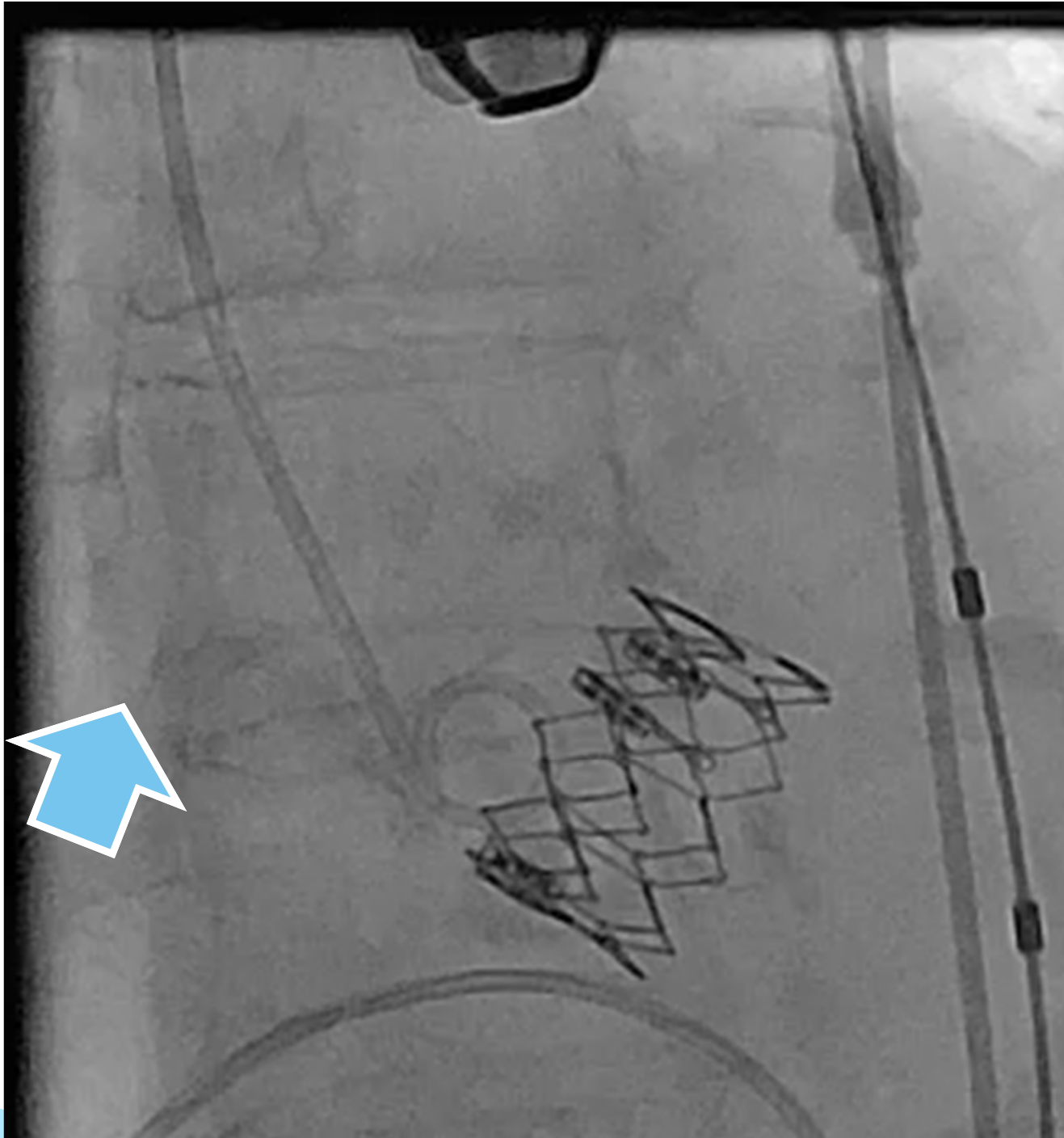
N=59	Value
Any death, n (%)	1 (1.7%)
Cardiovascular death, n (%)	0
Cerebral infarction, n (%)	0
TIA, n (%)	1 (1.7%)
Major vascular complications	1 (1.8%)
New PM implantation, n (%)	2 (3.4%)
Coronary obstruction, n (%)	2 (3.4%)

88 yo female



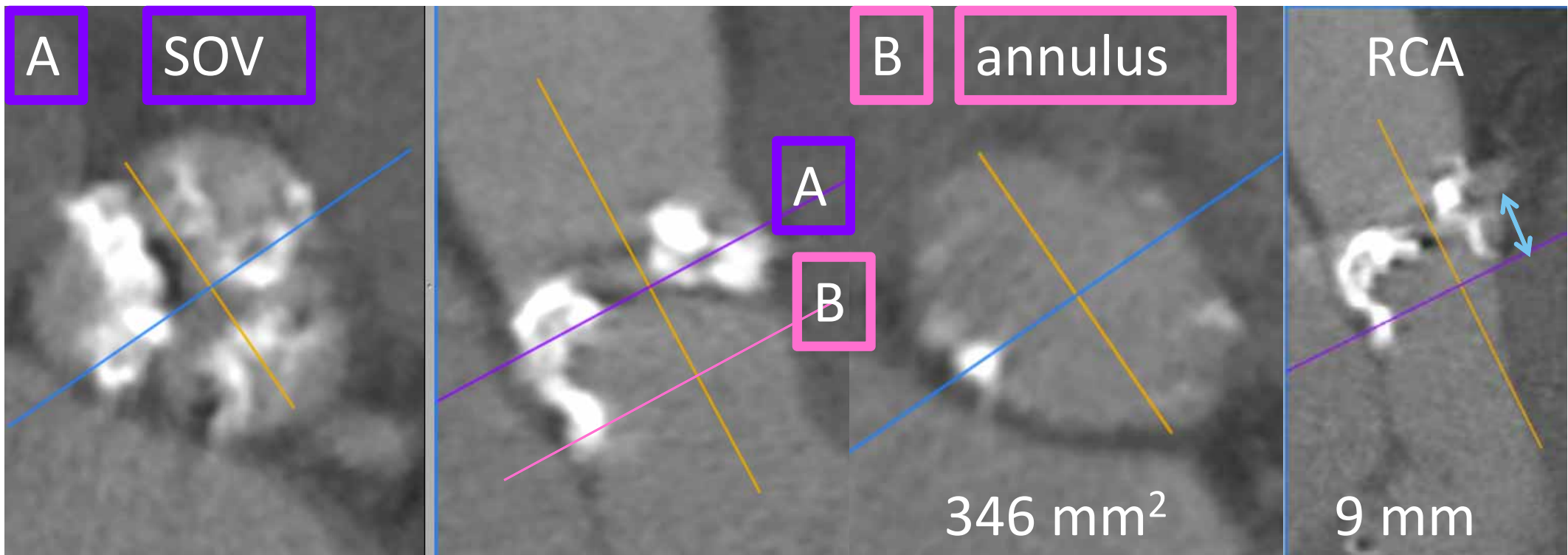






88yo female

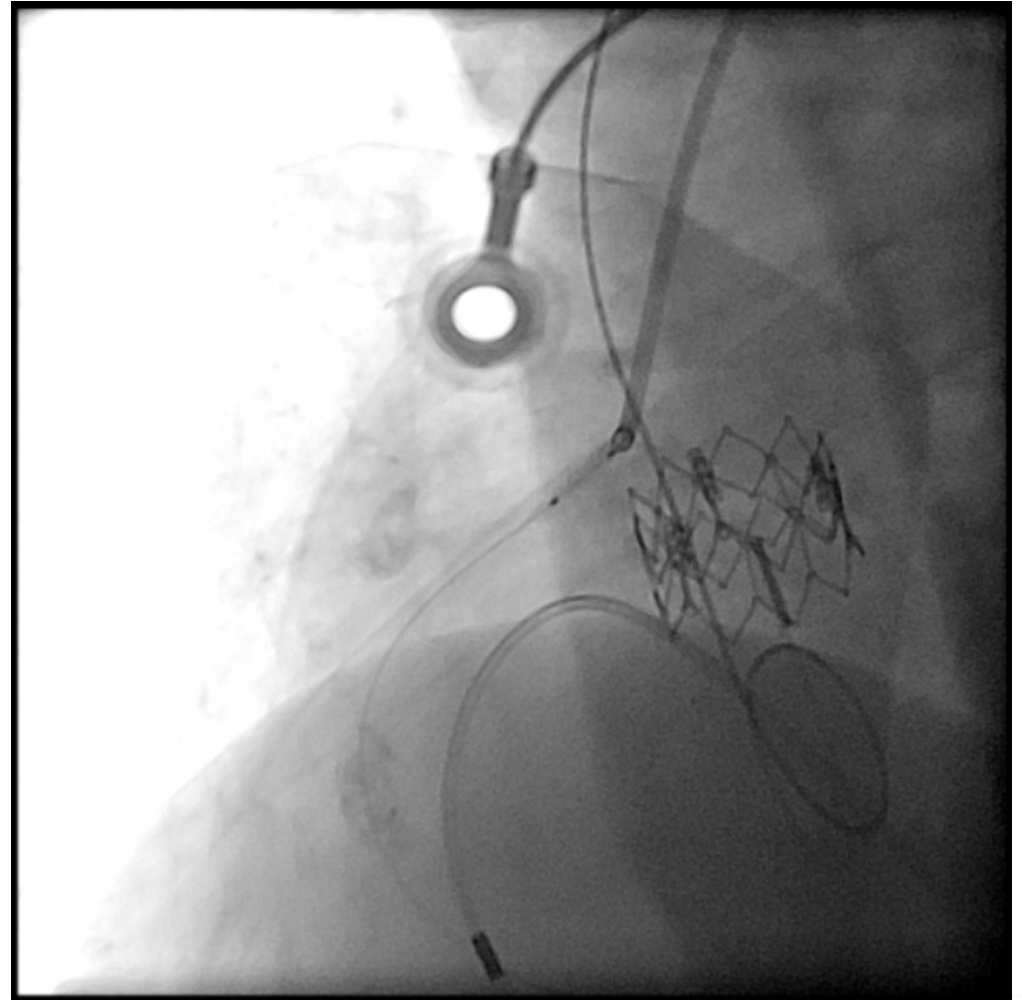
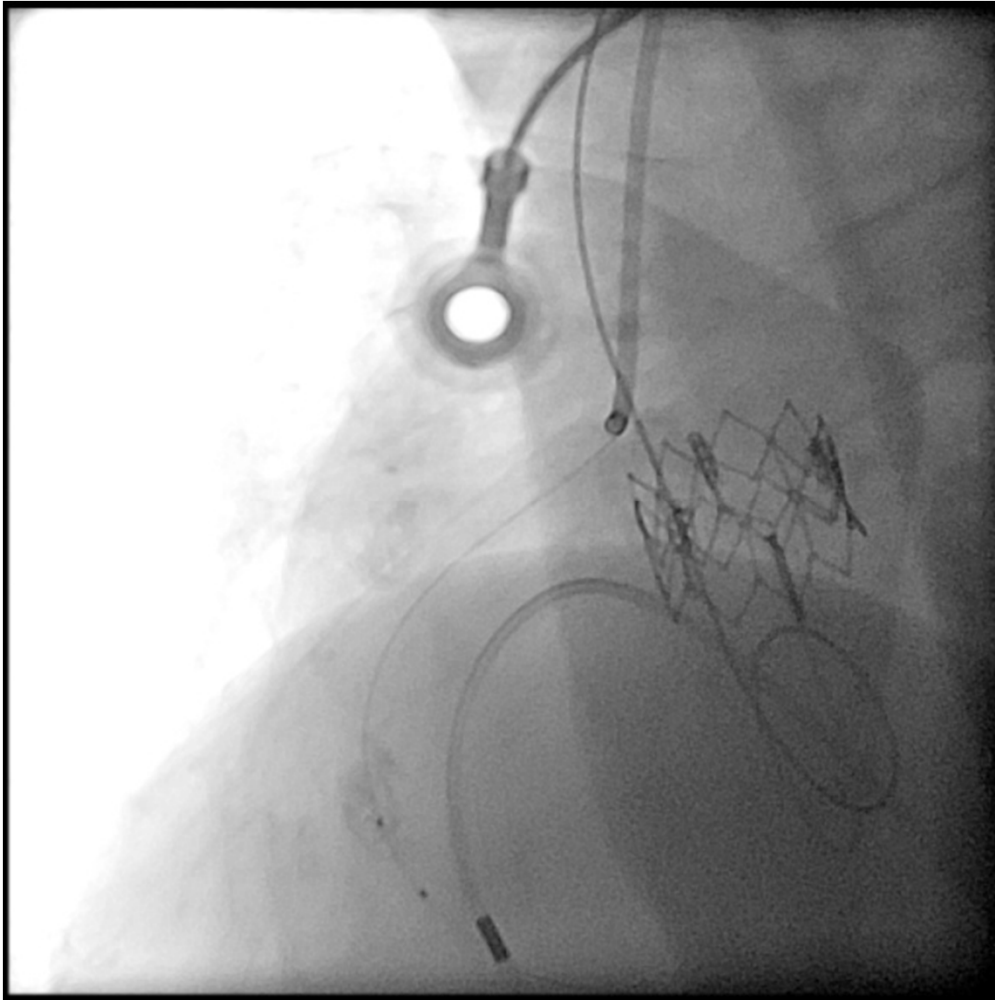
- Annulus :
 - CAAD (D_{area}) : 21.0 mm
 - $D_{\text{long}} \times D_{\text{short}}$: 17.4 mm x 21.6mm
 - RCA height: 9 mm
 - Root shot with a 18mm balloon → leak+



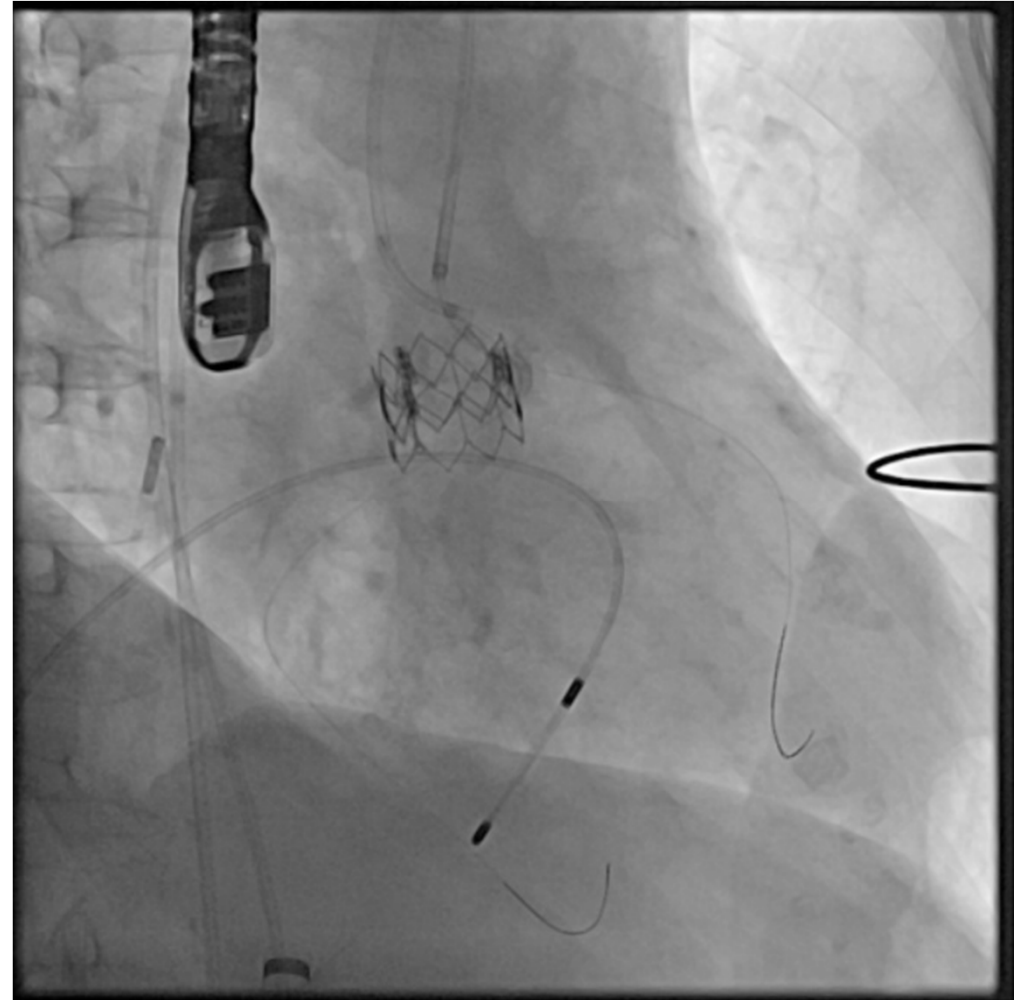
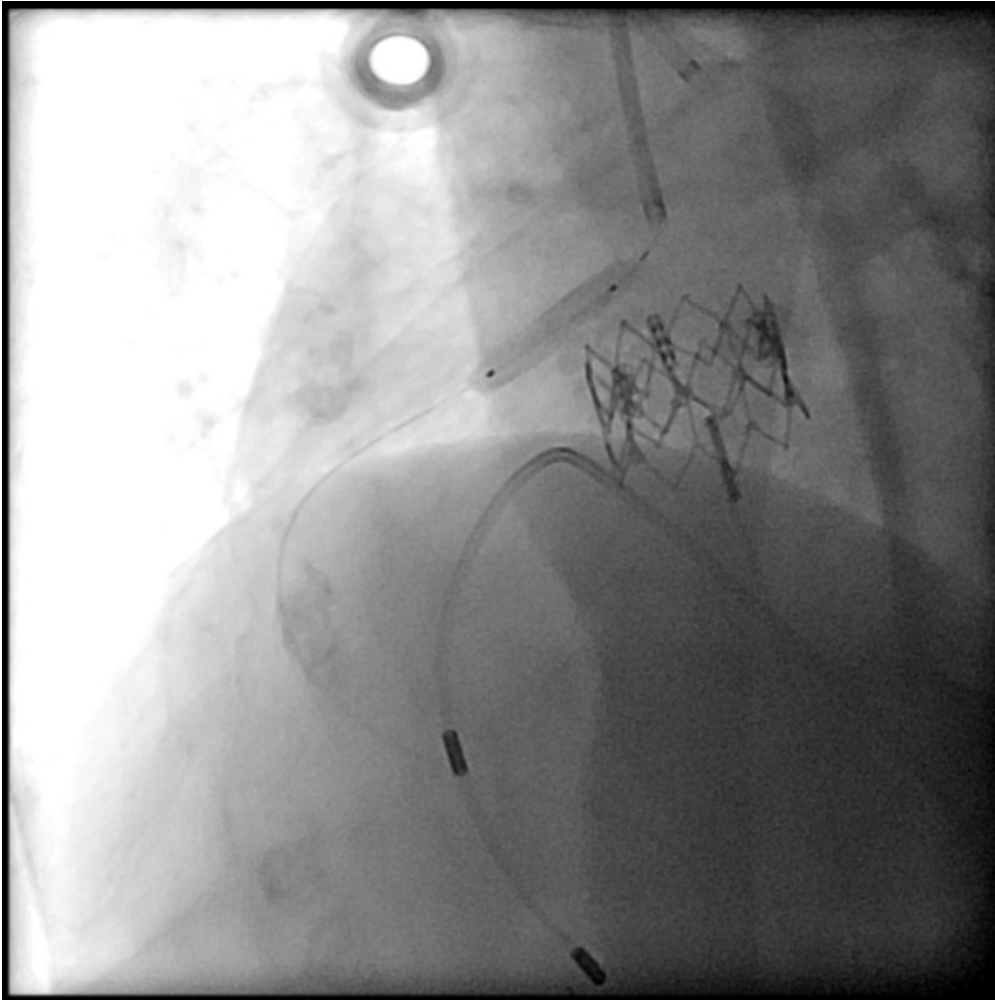
RCA protection



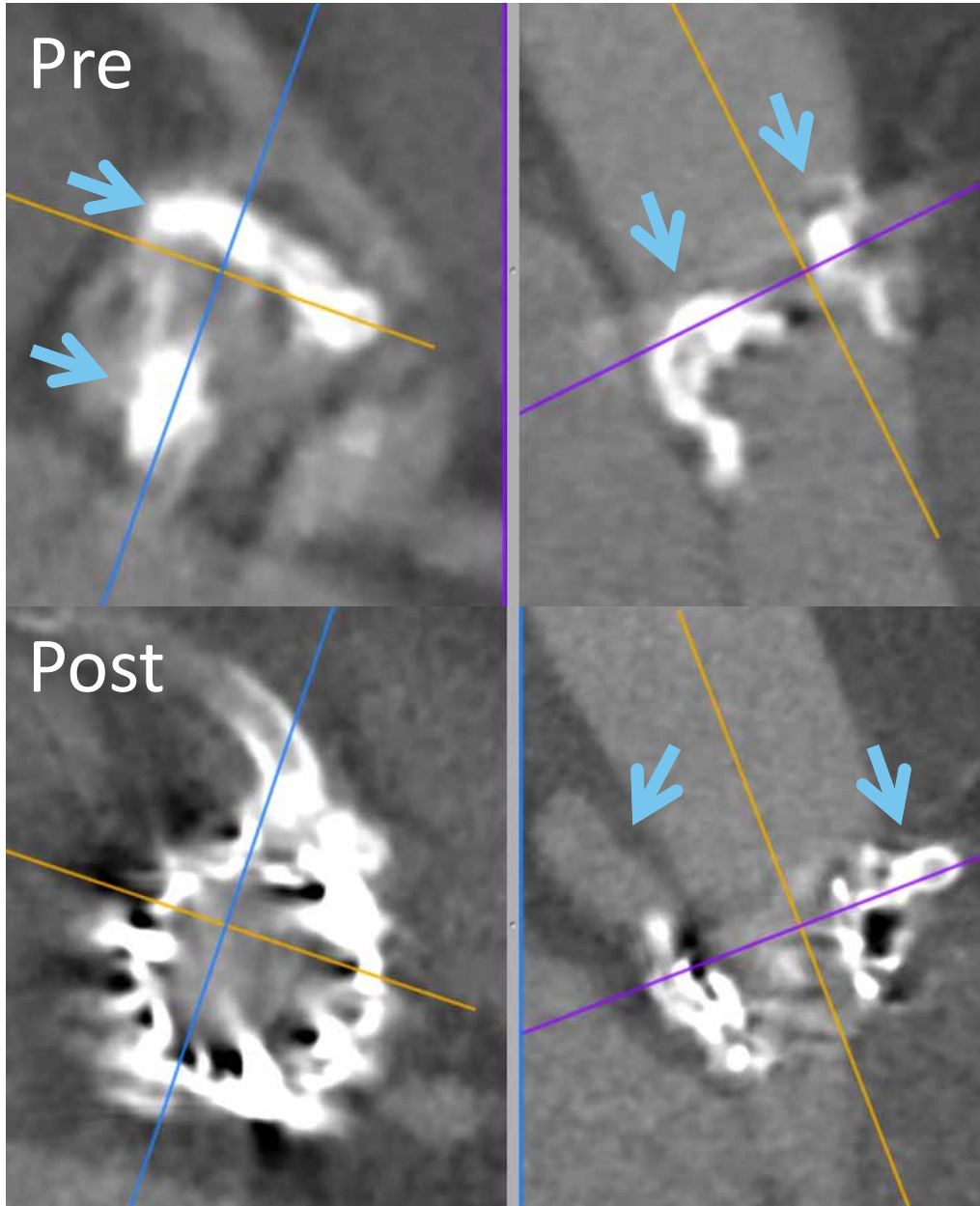
PCI to occluded RCA



Perforation of Sinus of Valsalva



Paired calcification, paired complications



These paired calcifications on the opposite sides might prevent pressure escape and eventually led to paired severe complications; coronary occlusion and STJ rupture.

Care should be taken not only for the degree but the distribution of calcifications.

Conclusion

- Initial experience in Japan is excellent.
- Small body size of Japanese cohort leads to specific complication (coronary obstruction, aortic root-related complications etc...).
- Data from Asia to the world.