Left atrial appendage occlusion with the steerable sheath

Jai-Wun Park, MD

Klinik für Kardiologie
Campus Benjamin Franklin
Charité - Universitätsmedizin Berlin

JCR Busan, Korea
2018, December 8th

What is an ideal LAAO-strategy?

1. Successful sealing off the LAA

2. Avoiding device embolization & LAA perforation

3. Shortening implantation time

4. Shortening learning curve

5. Bail out in case of device embolization

What is an ideal LAAO-strategy?

5 arguments for using steerable sheath

1. **Successful sealing off the LAA**

More controlled and precise landing of the device

2. **Avoiding device embolization & LAA perforation**

More controlled and atraumatic advance of sheath into LAA

3. **Shortening implantation time**

Using one cath for TS-access and device delivery and no need for repositioning

4. **Shortening learning curve**

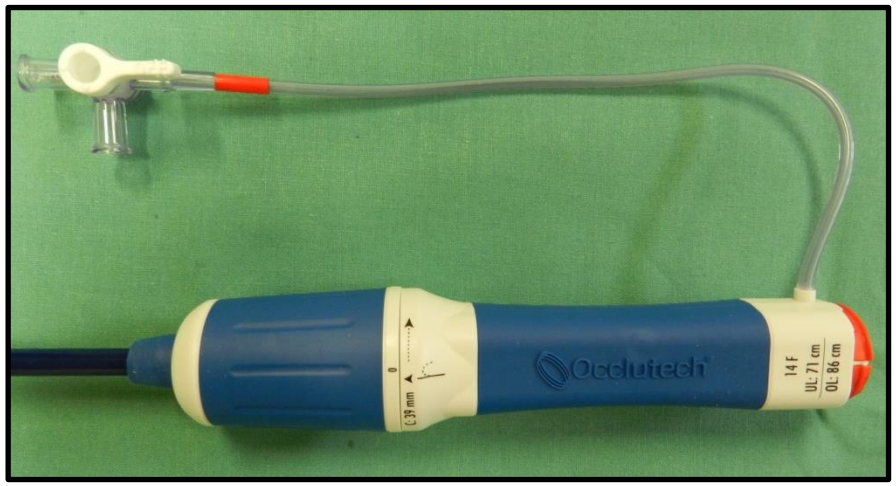
simple and forgiving unprecise TSP-site

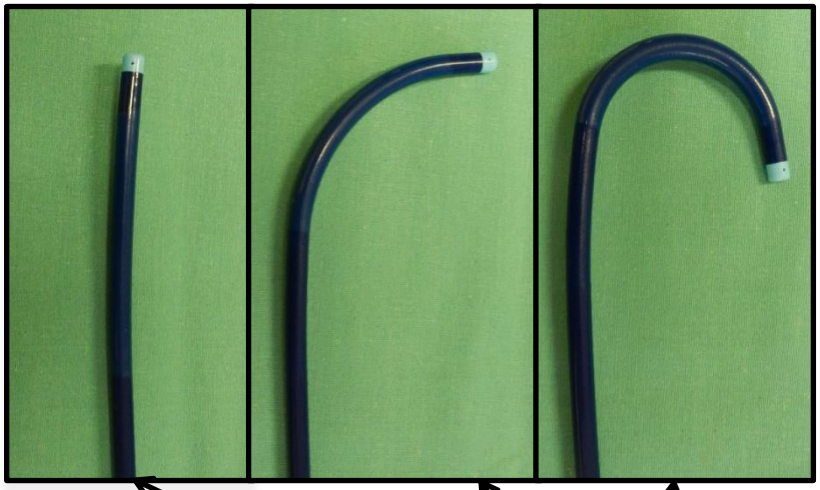
5. **Bail out in case of device embolization**

Easy, fast, and safe removal of the device

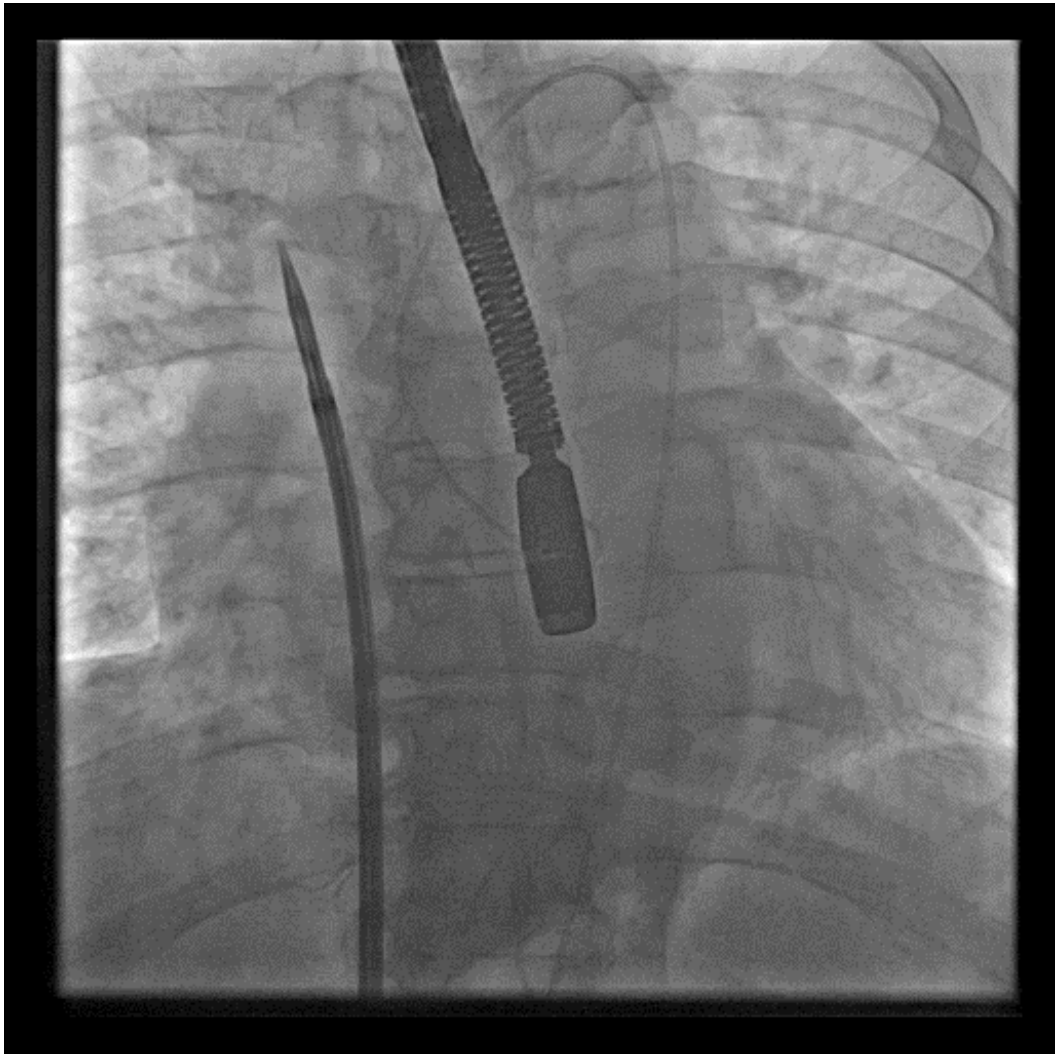
➡ ***Operator stress*** 🡻

Occlutech® steerable sheath 14F

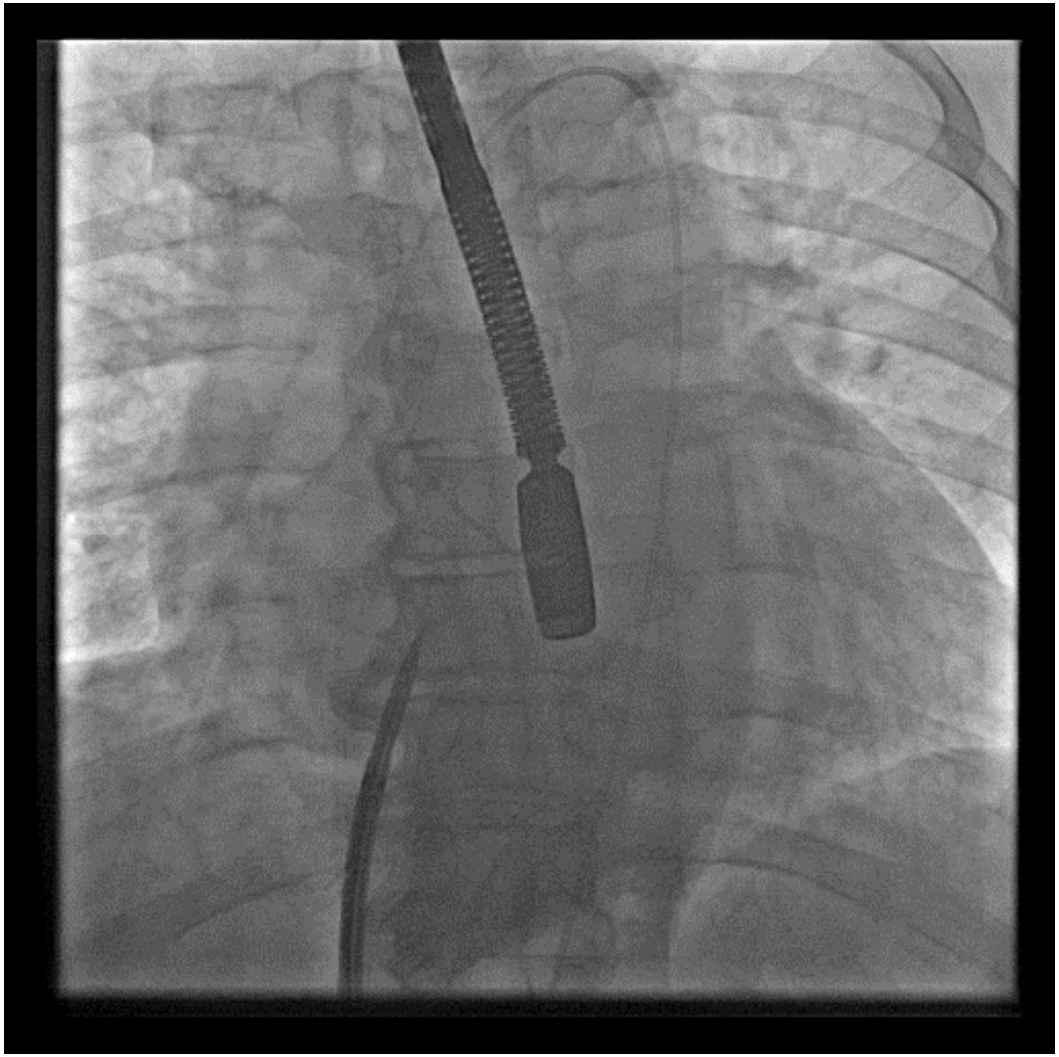




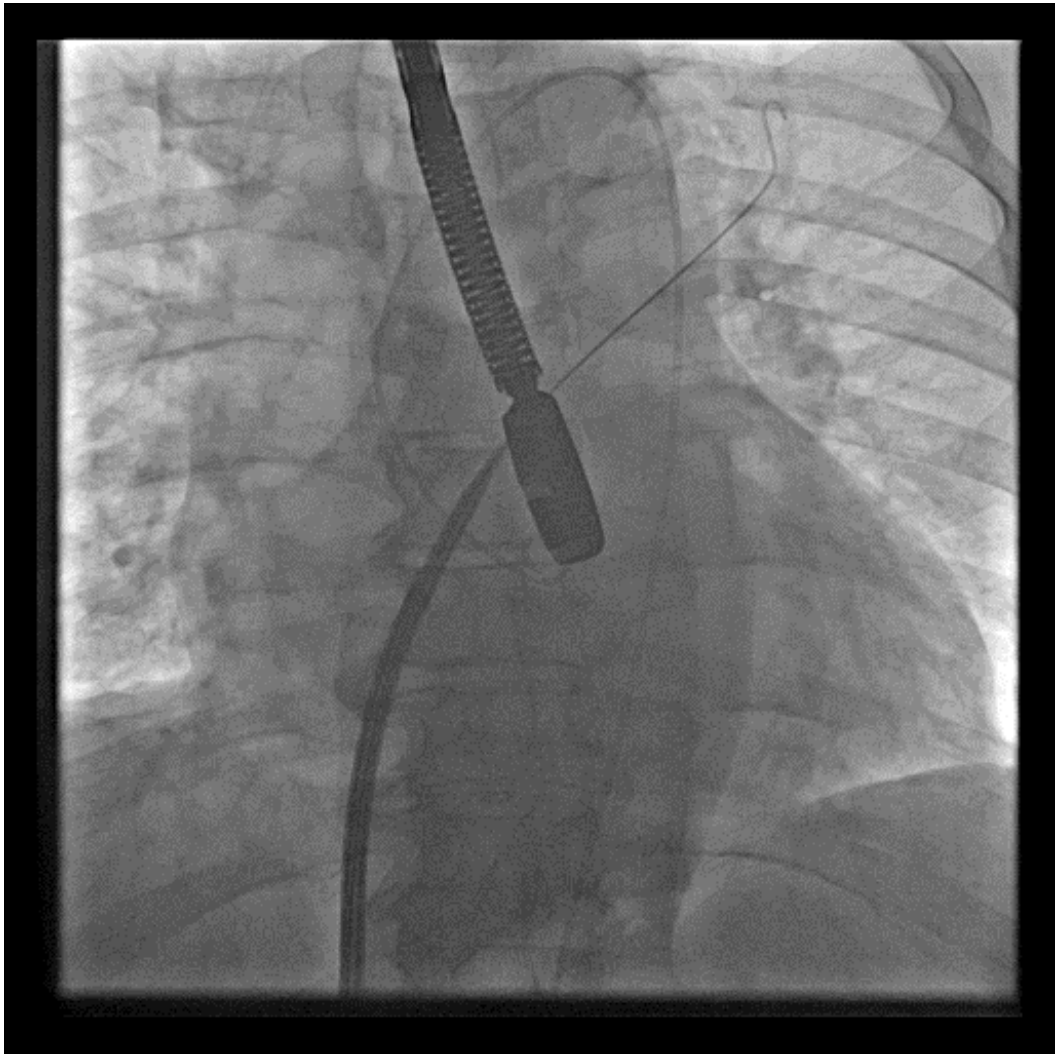
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



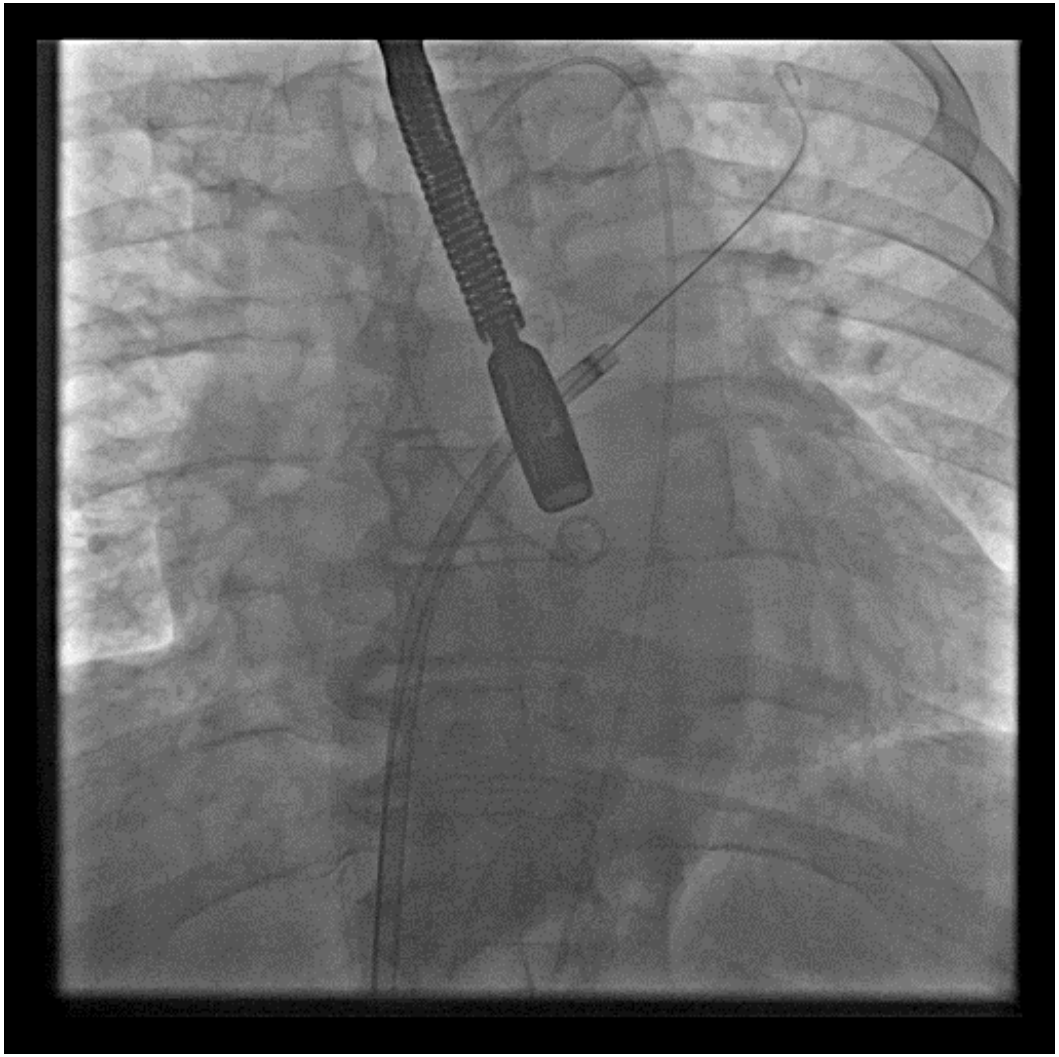
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



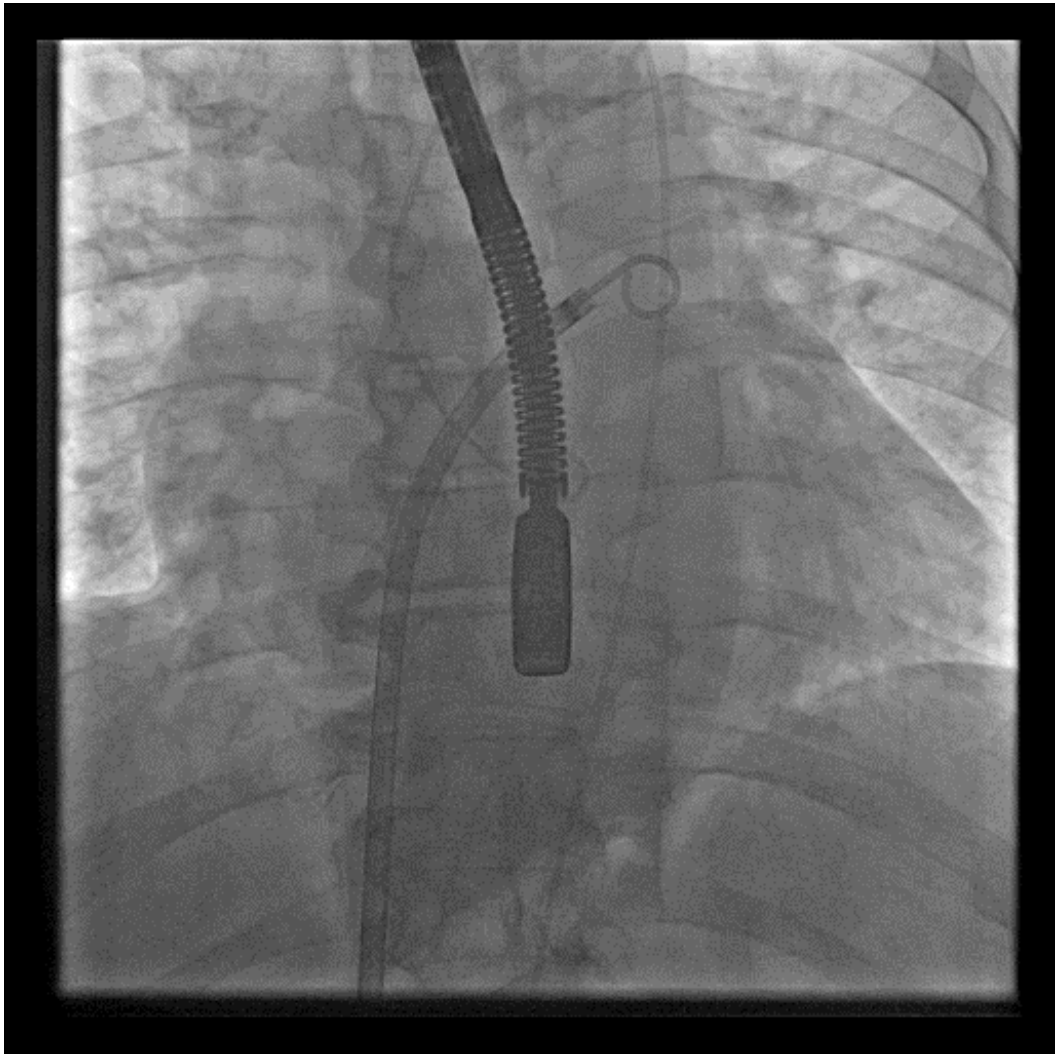
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



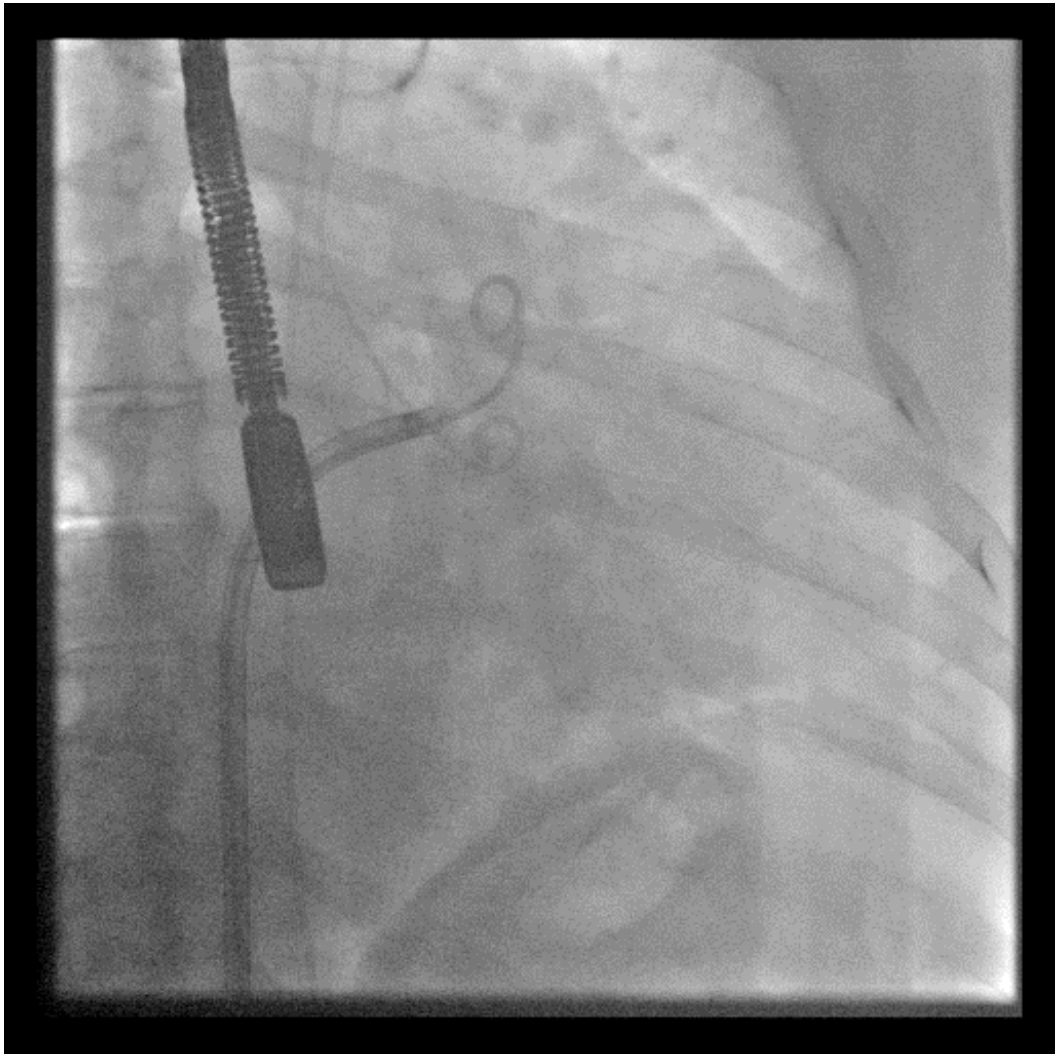
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



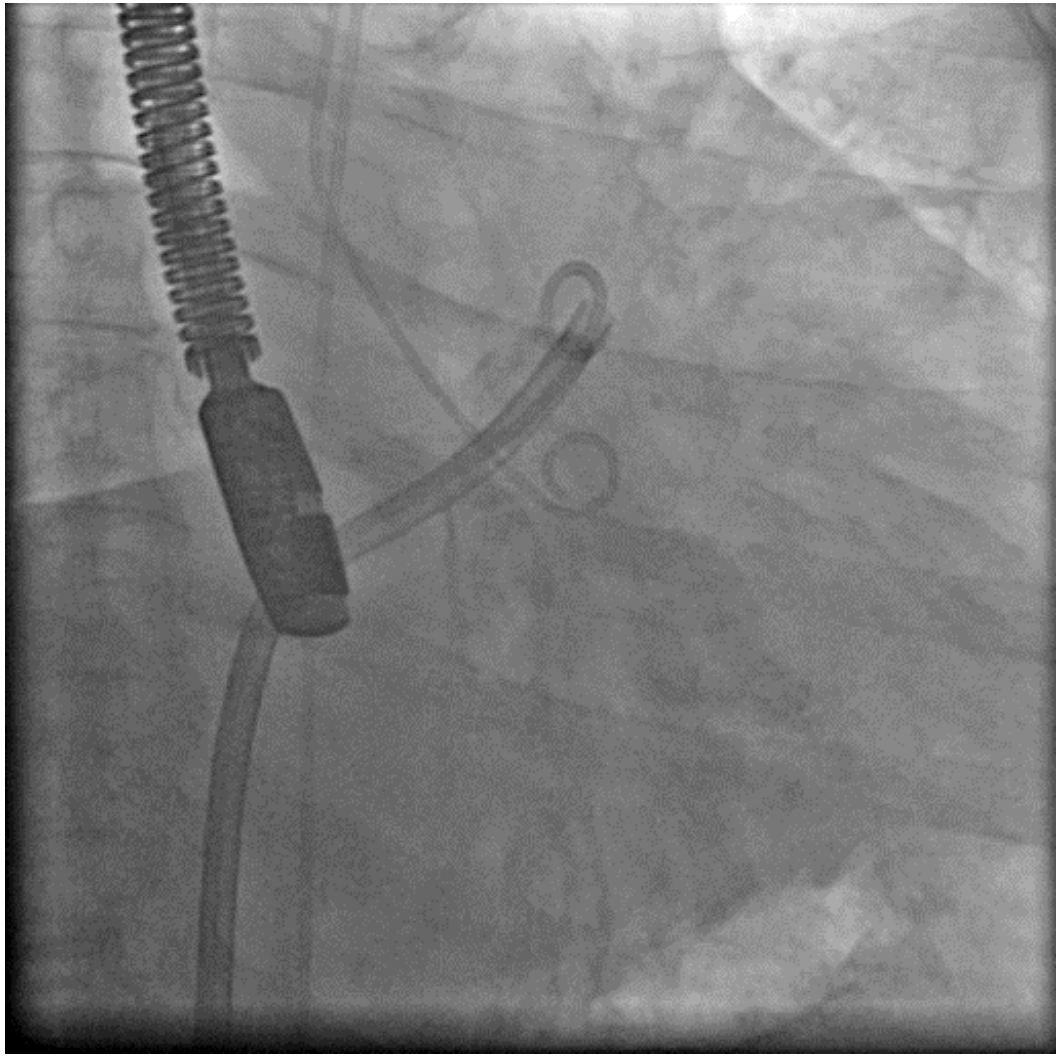
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



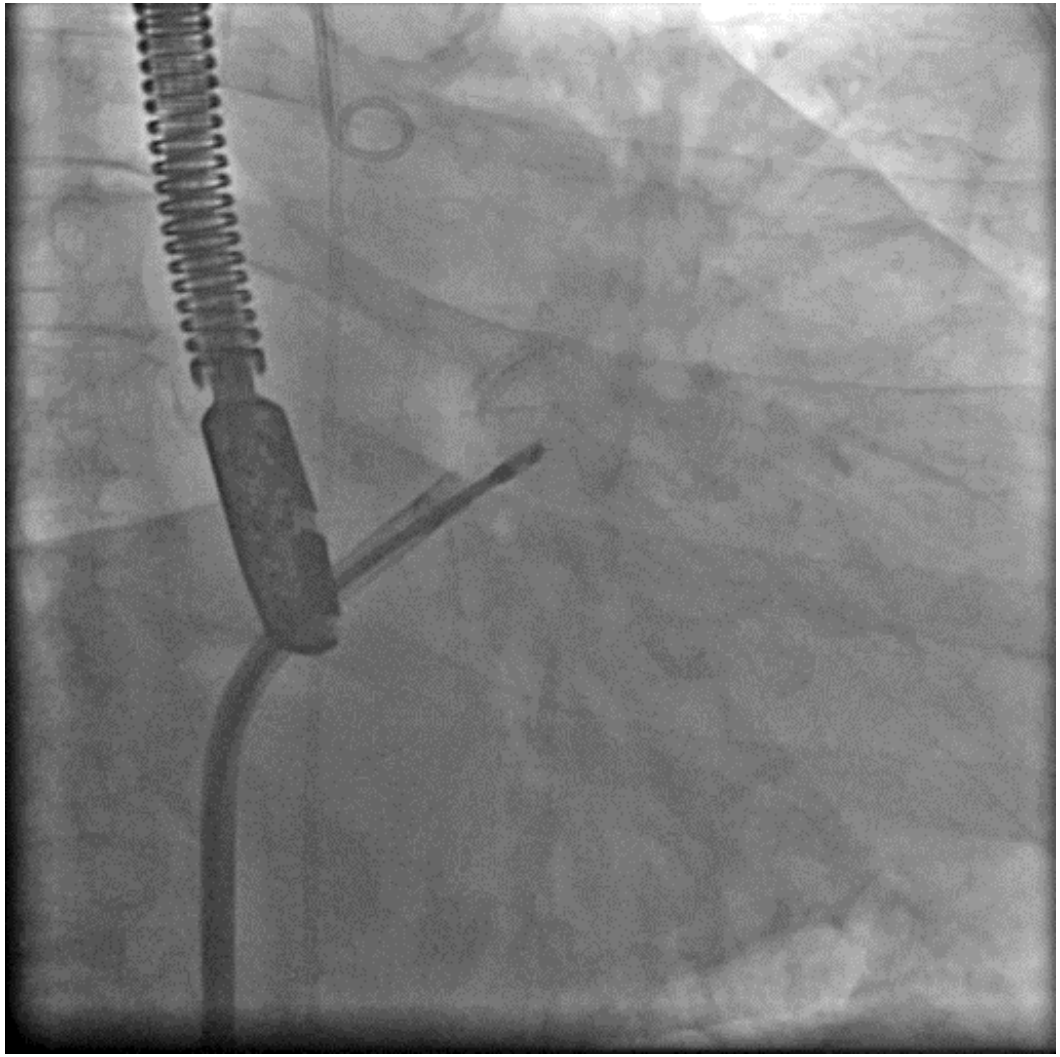
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



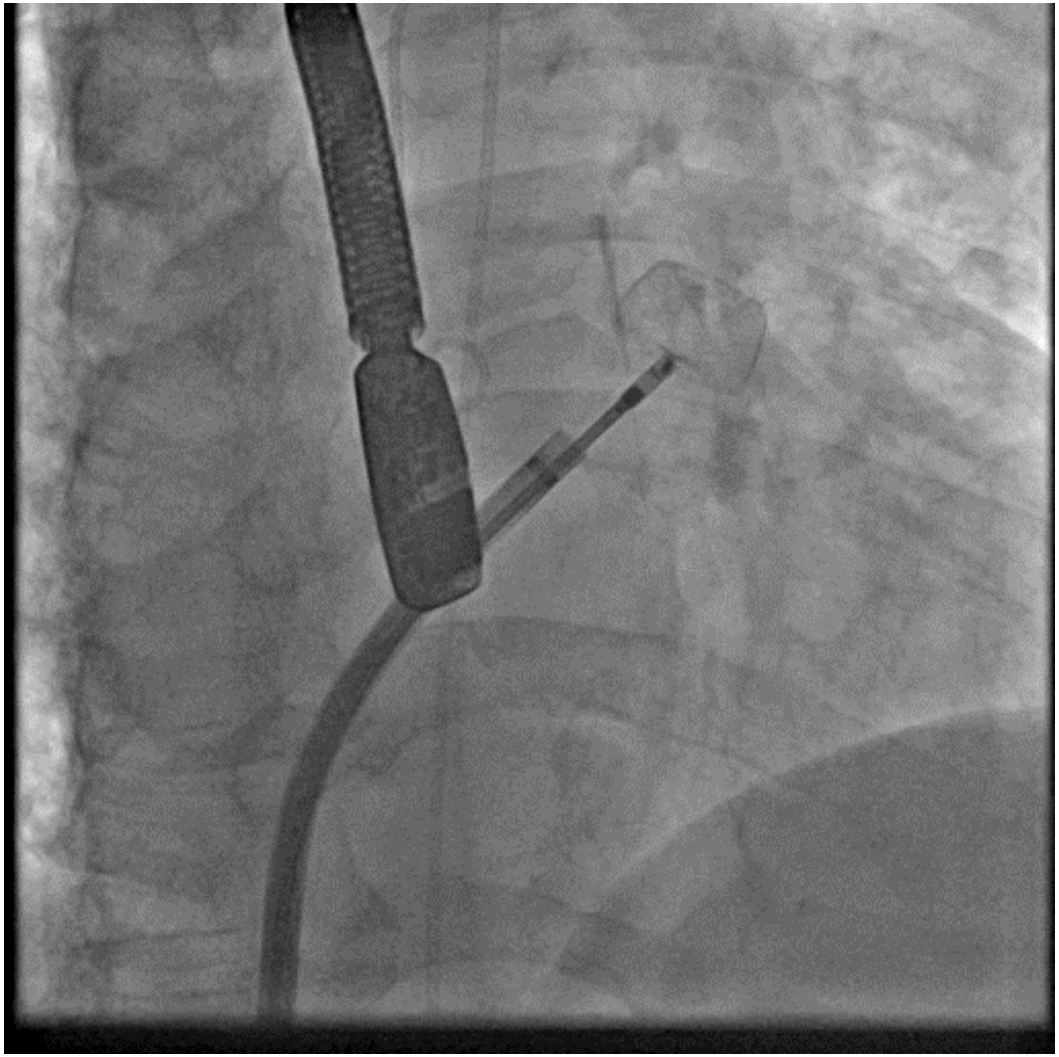
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



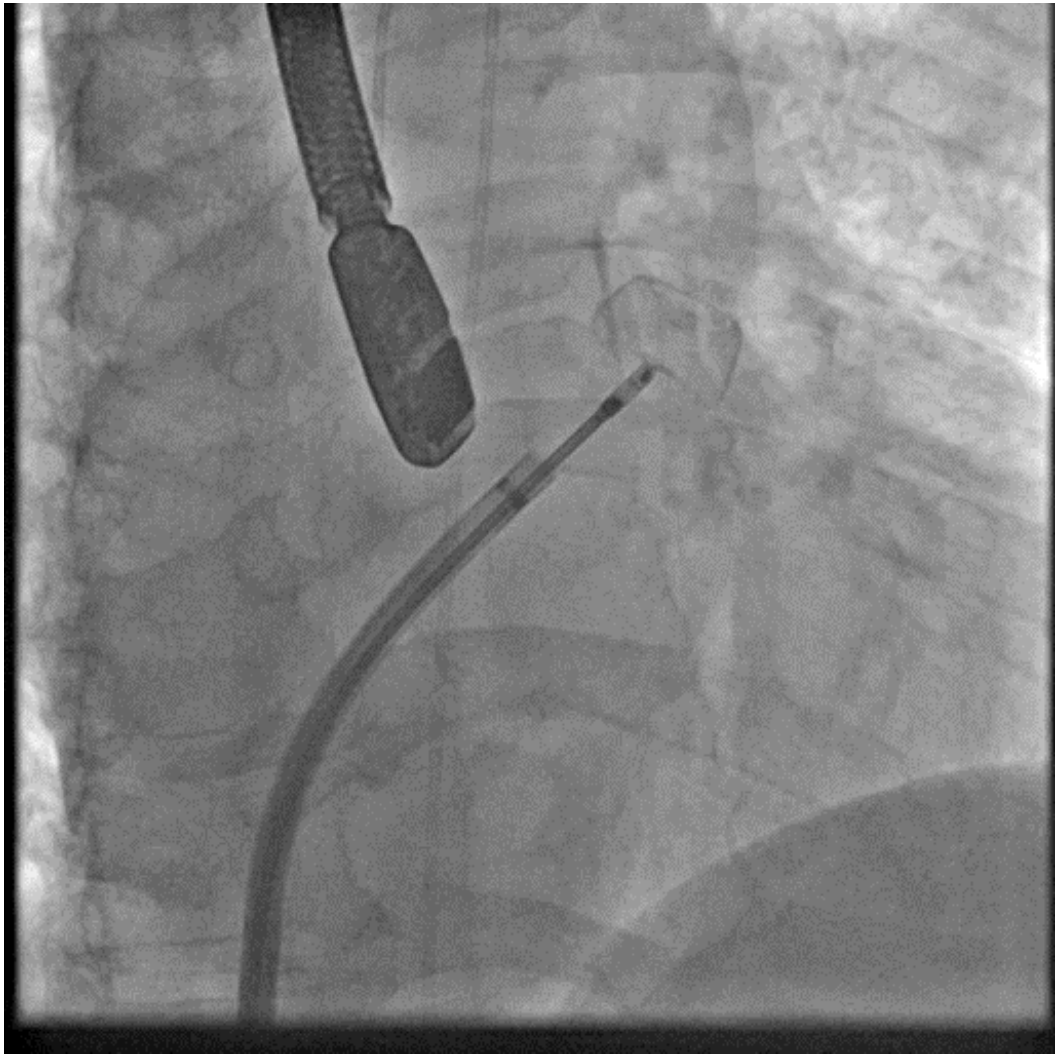
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



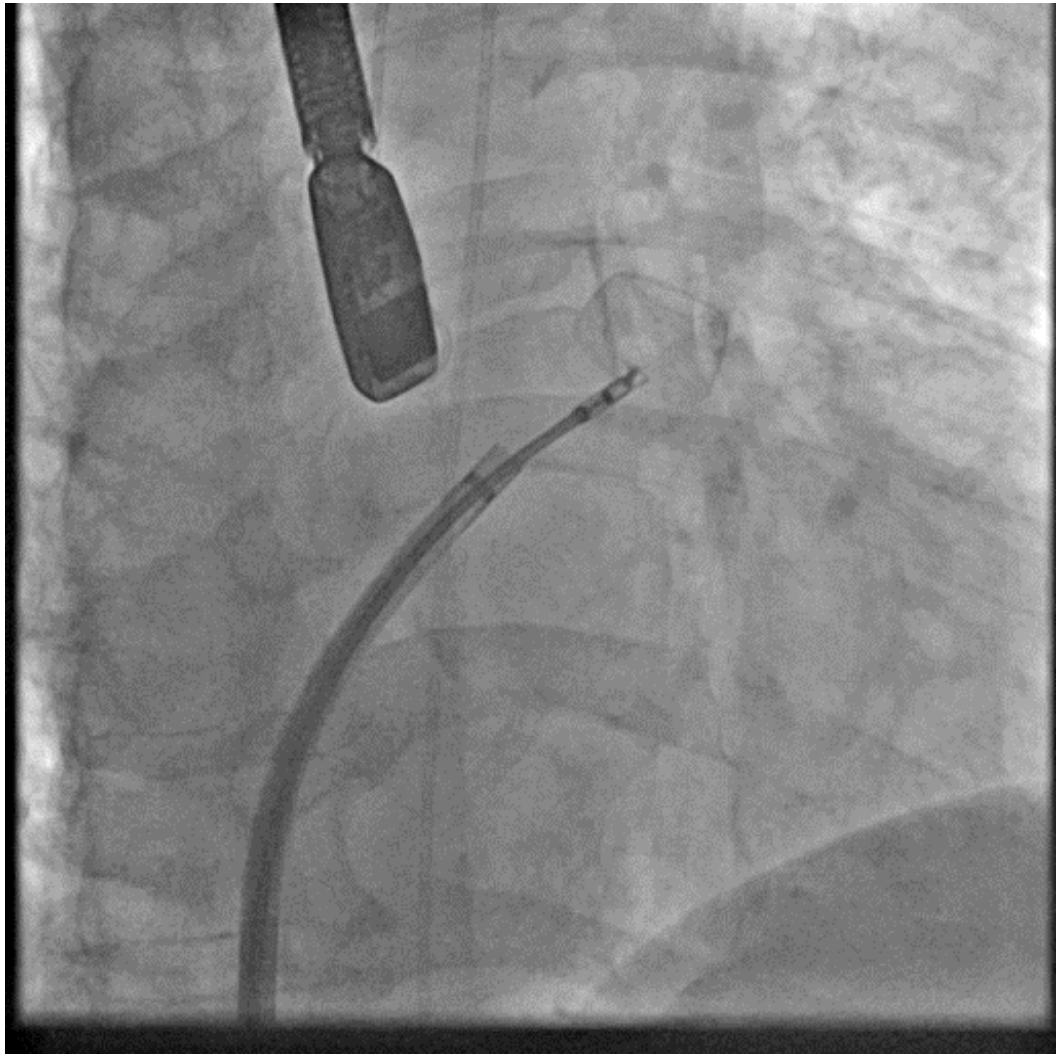
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



OCCLUTECH LAAO
steerable sheath for TSP & device delivery

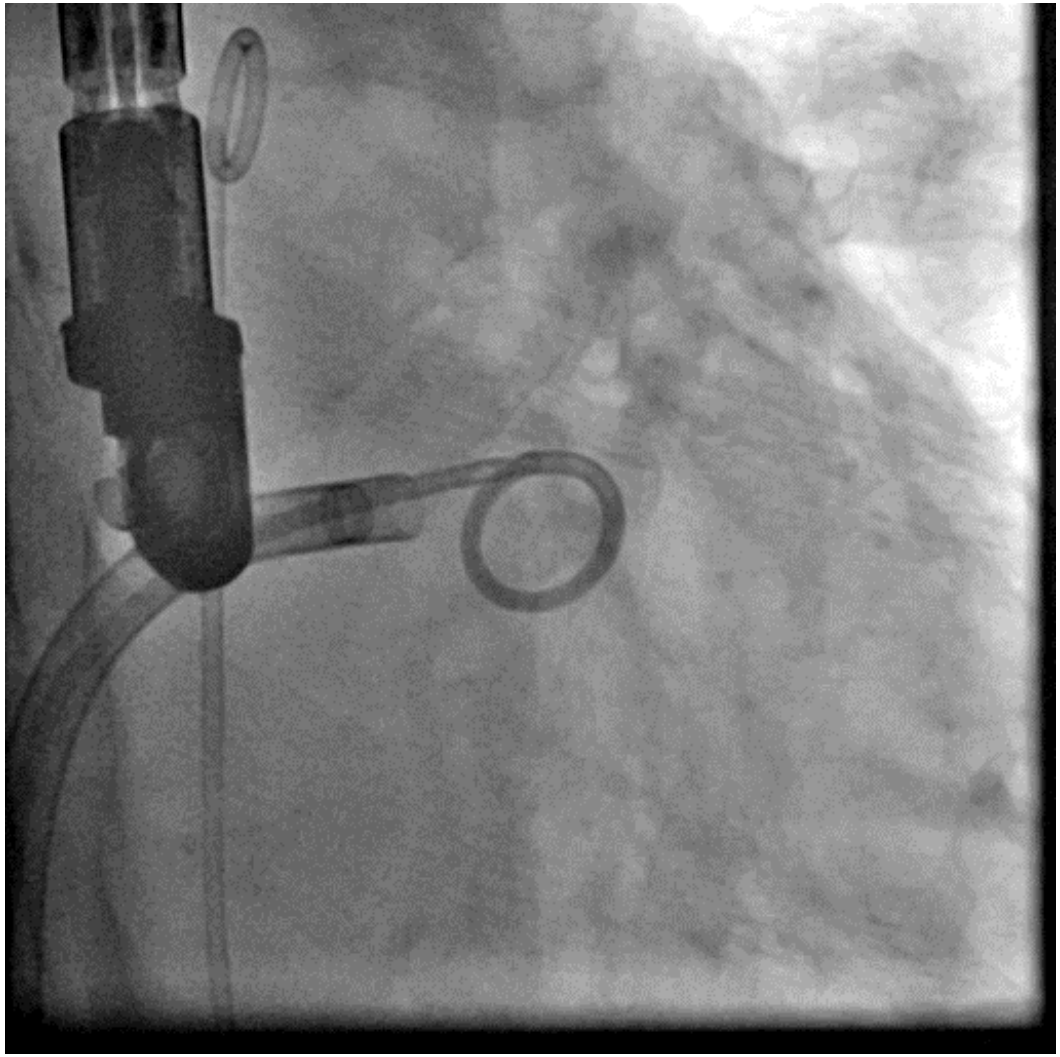


OCCLUTECH LAAO
steerable sheath for TSP & device delivery

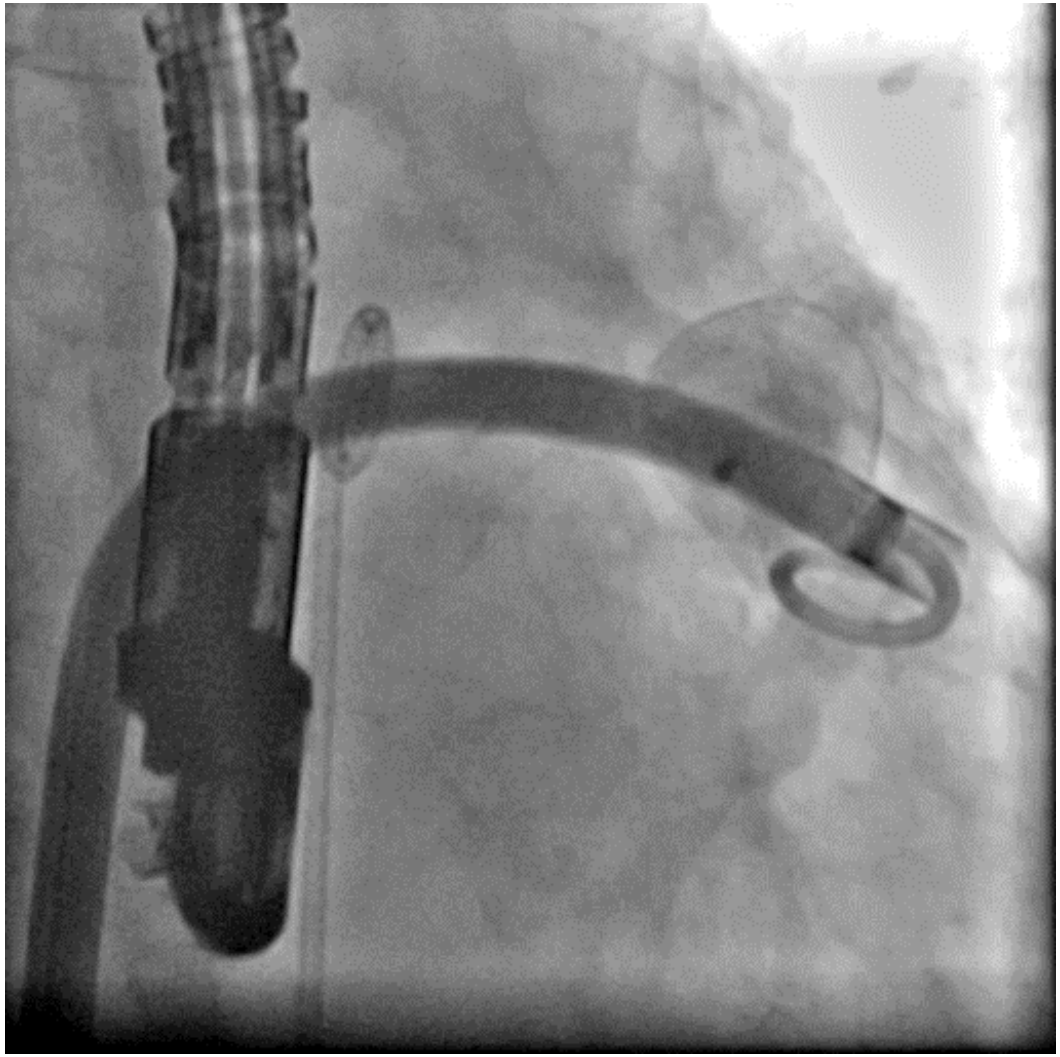


OCCLUTECH LAAO
steerable sheath for TSP & device delivery

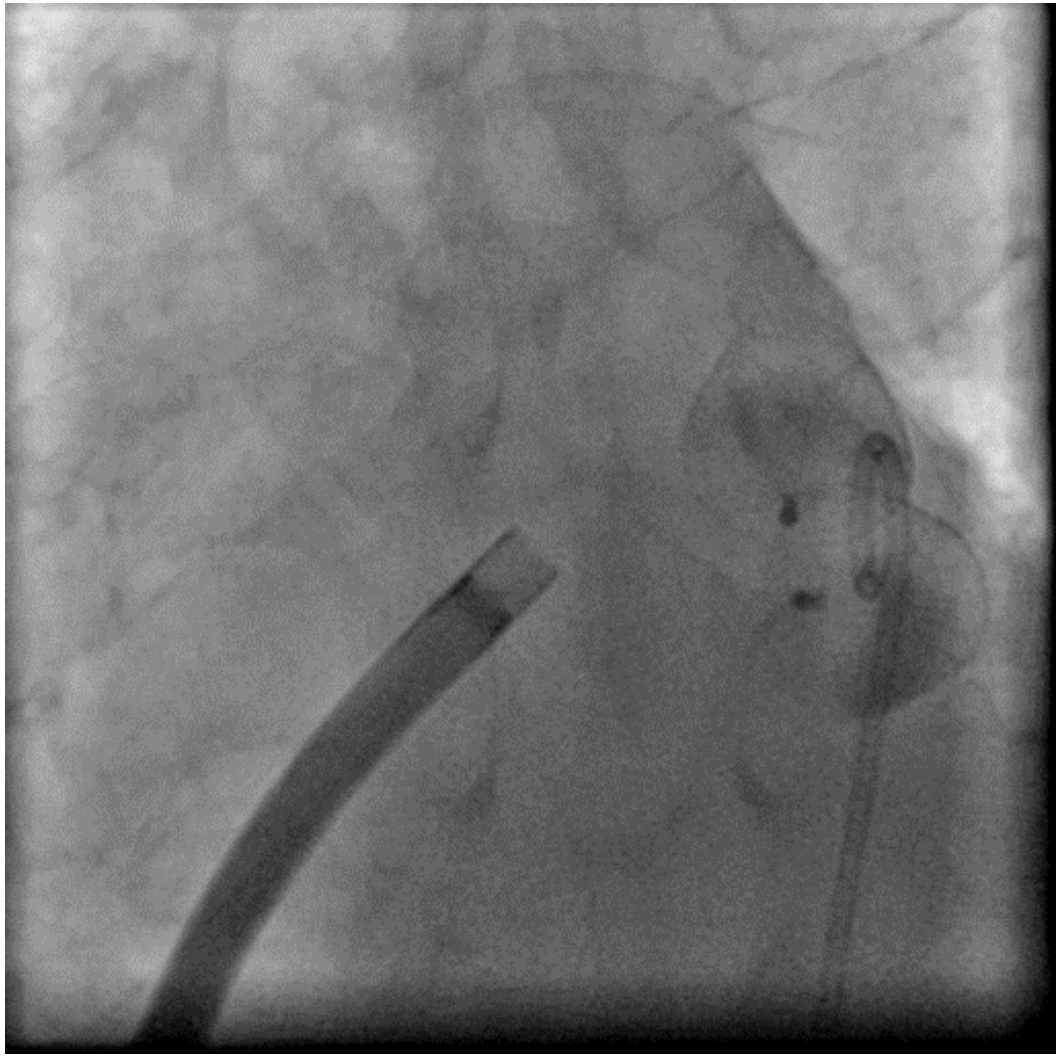
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



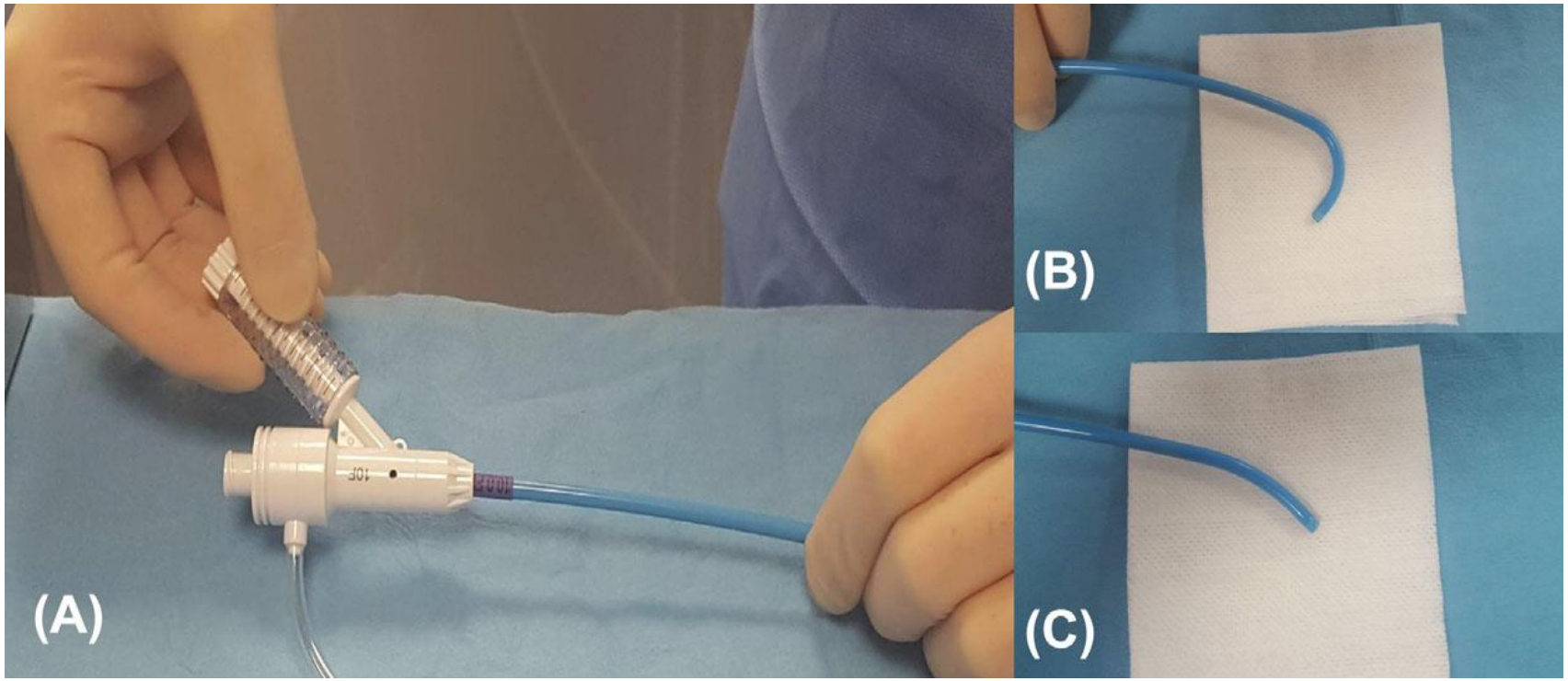
OCCLUTECH LAAO
steerable sheath for TSP & device delivery



OCCLUTECH LAAO
steerable sheath for TSP & device delivery

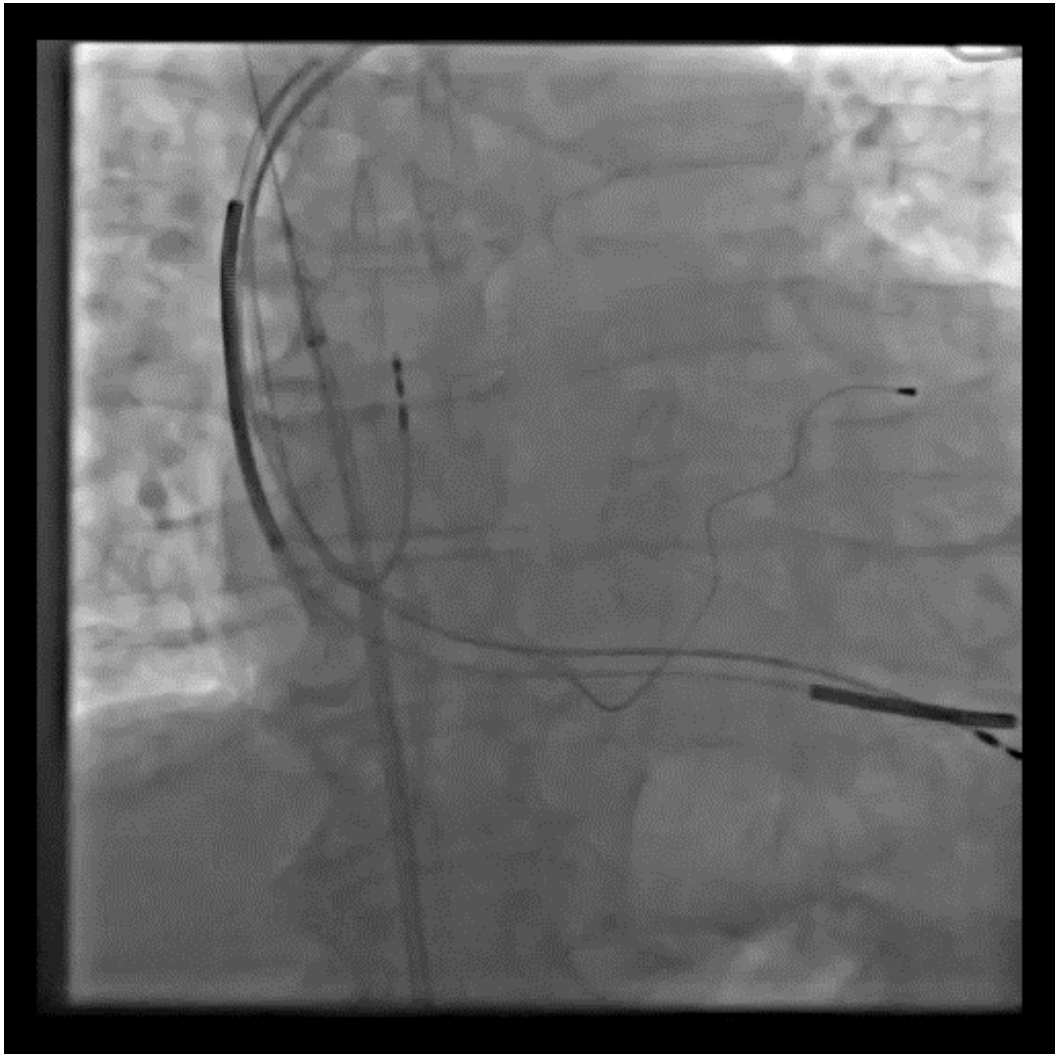


LAmbre LAAO steerable sheath Fustar® for TSP & device delivery, 10F



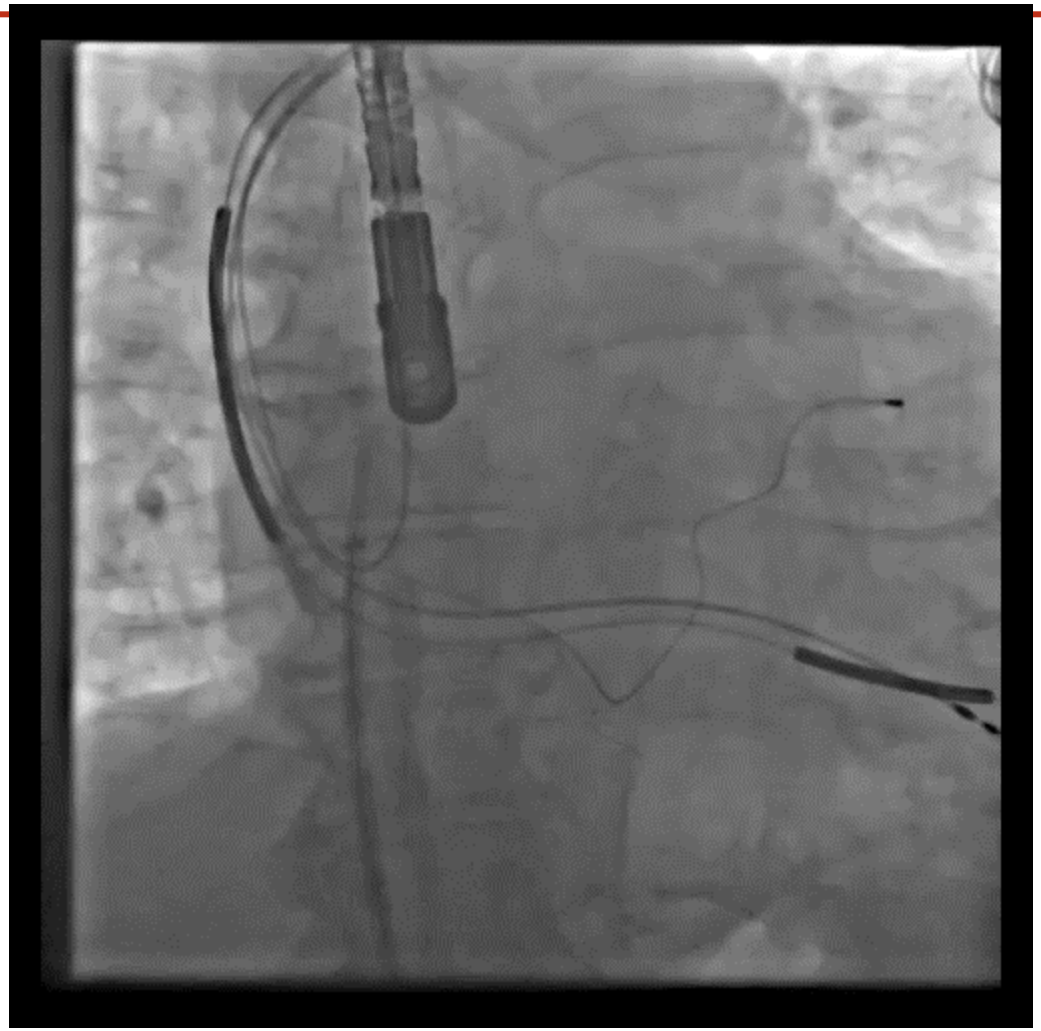
Kleinecke C, Monterrosas OG, … Shin E-S, et Park J-W. J Interven Cardiol. 2018;1–6.

LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

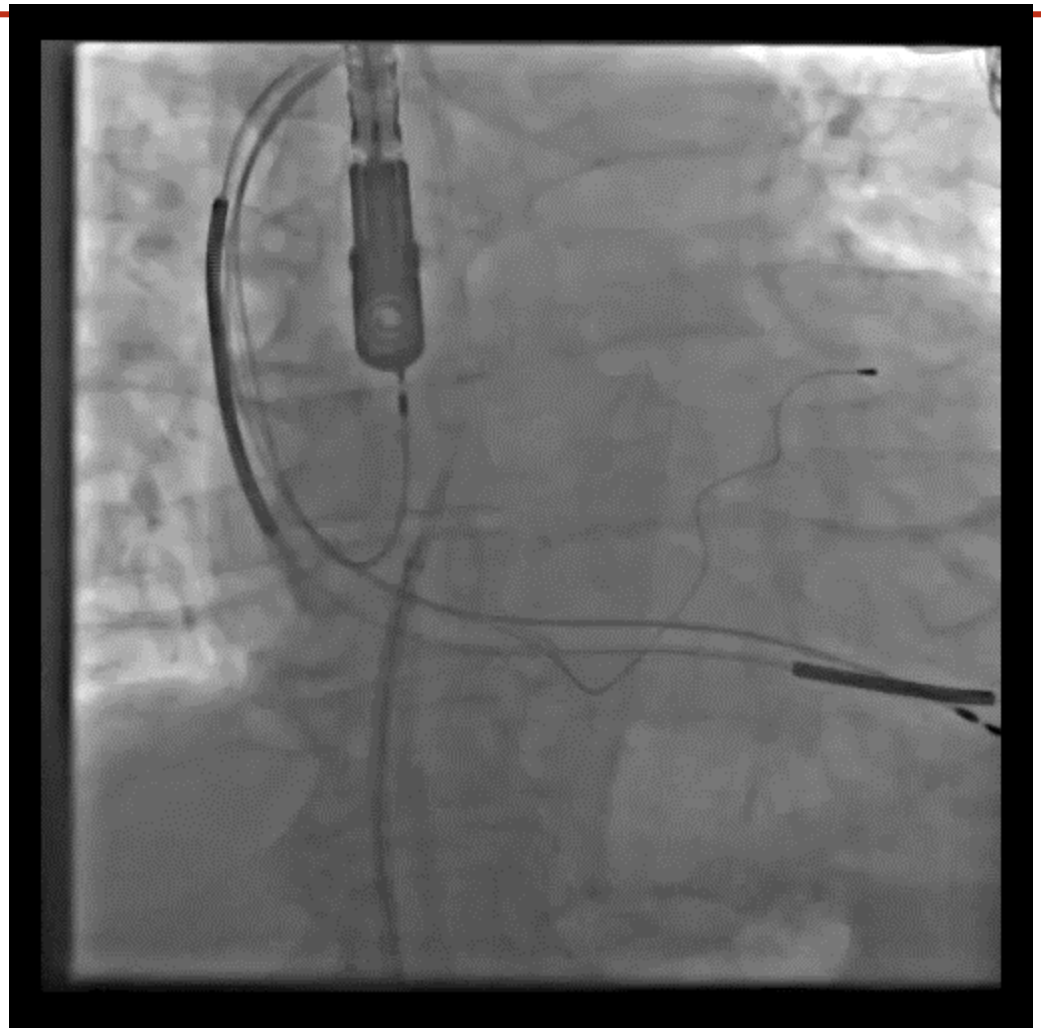


LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



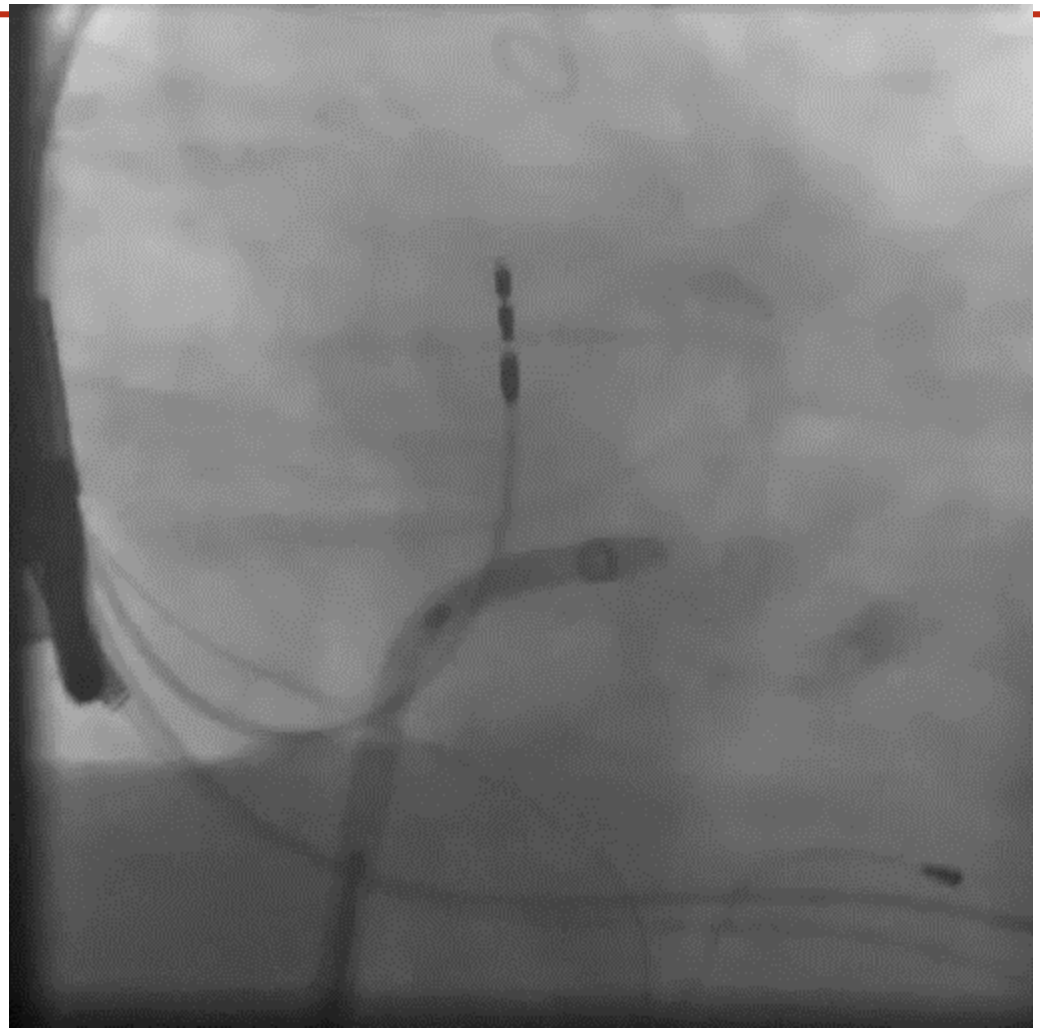
LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

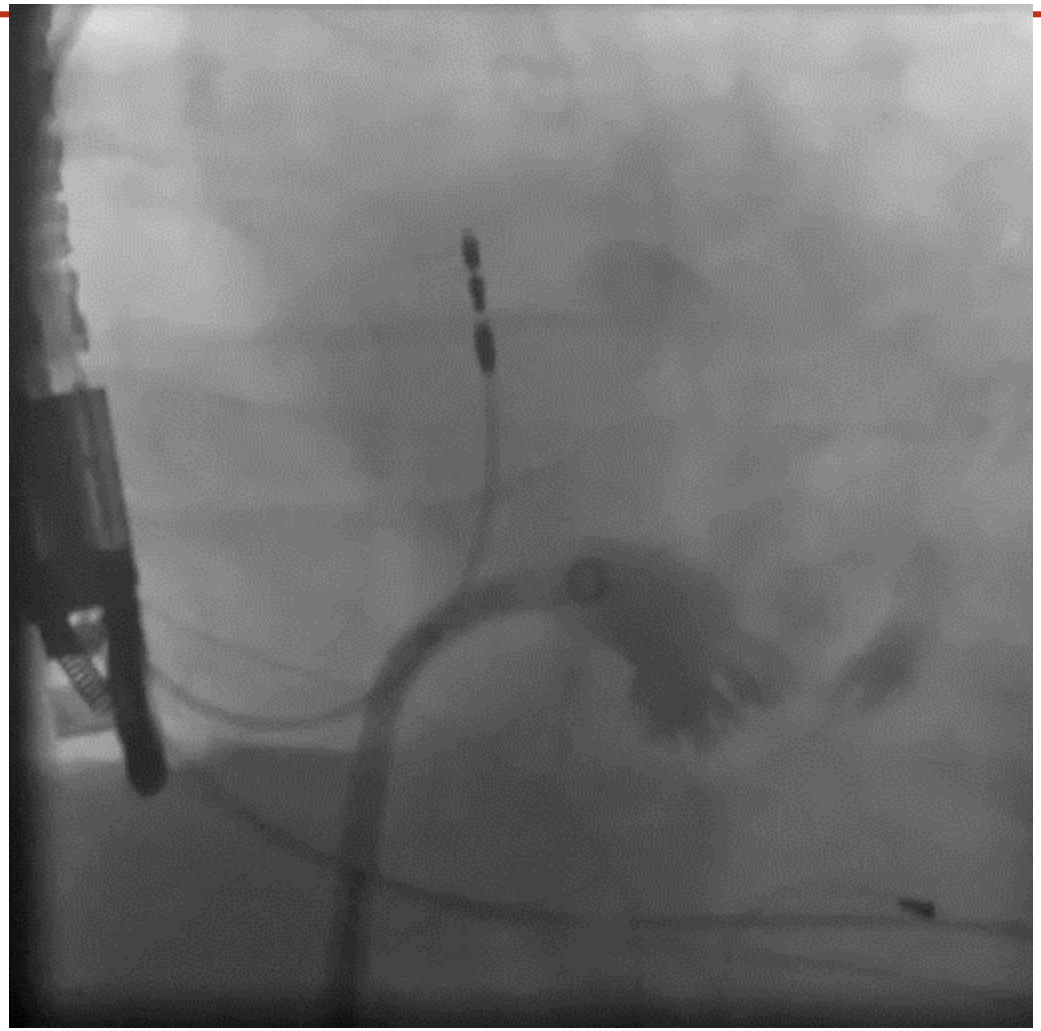
LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

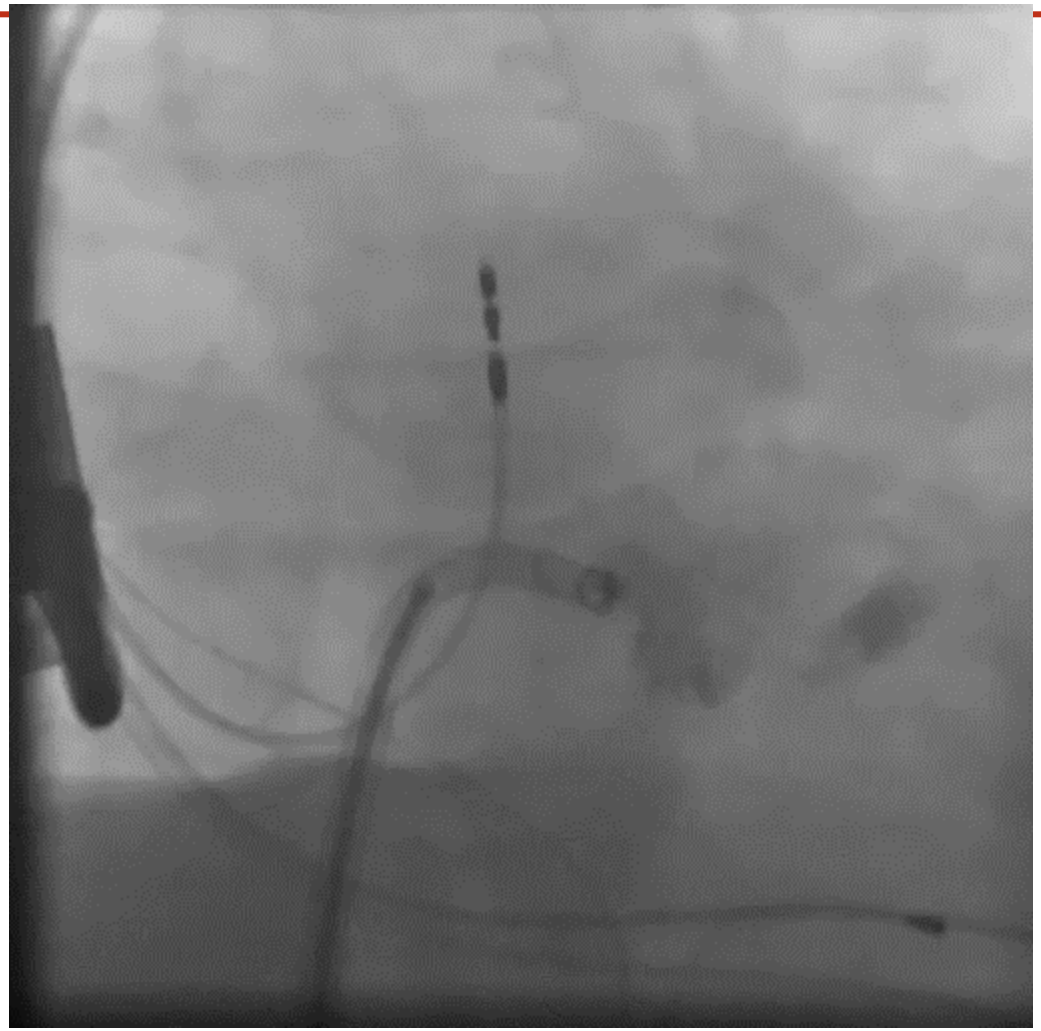
LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



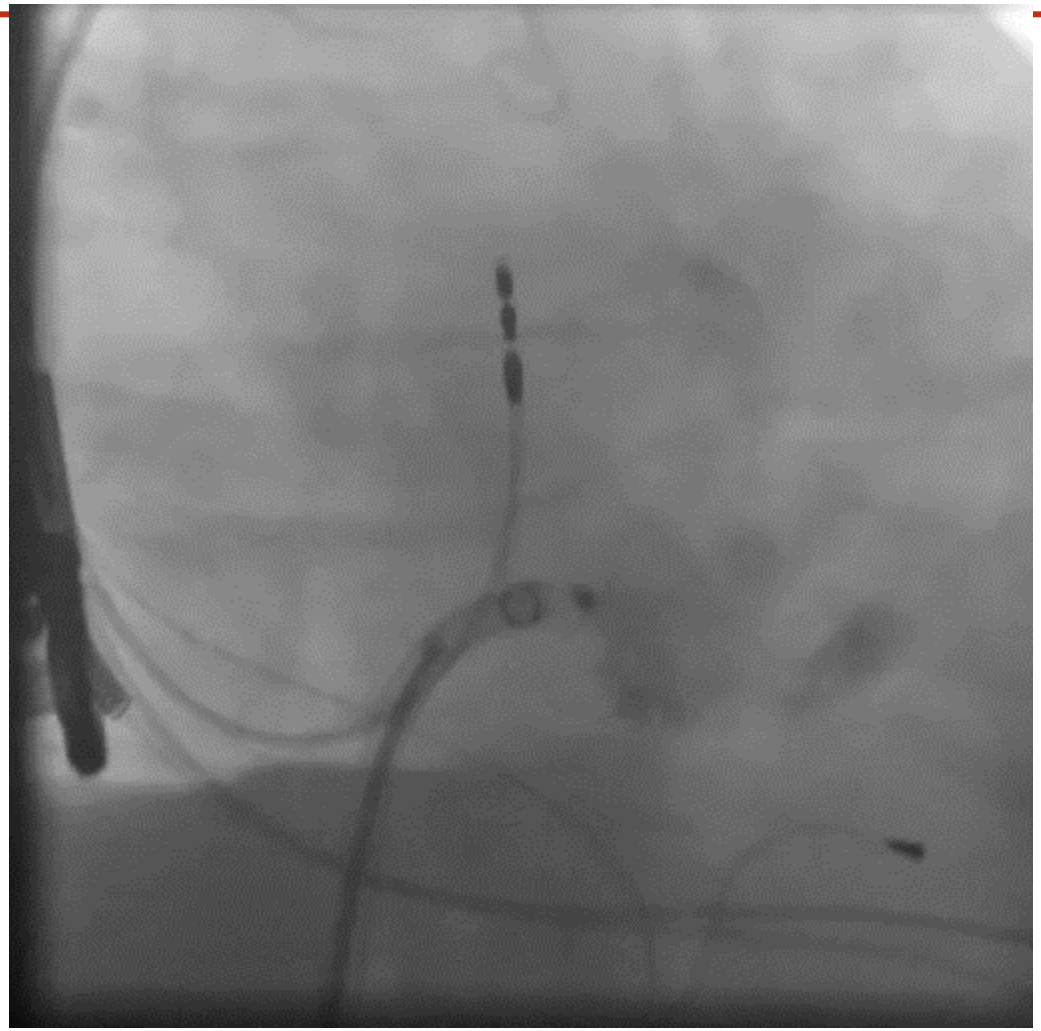
LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



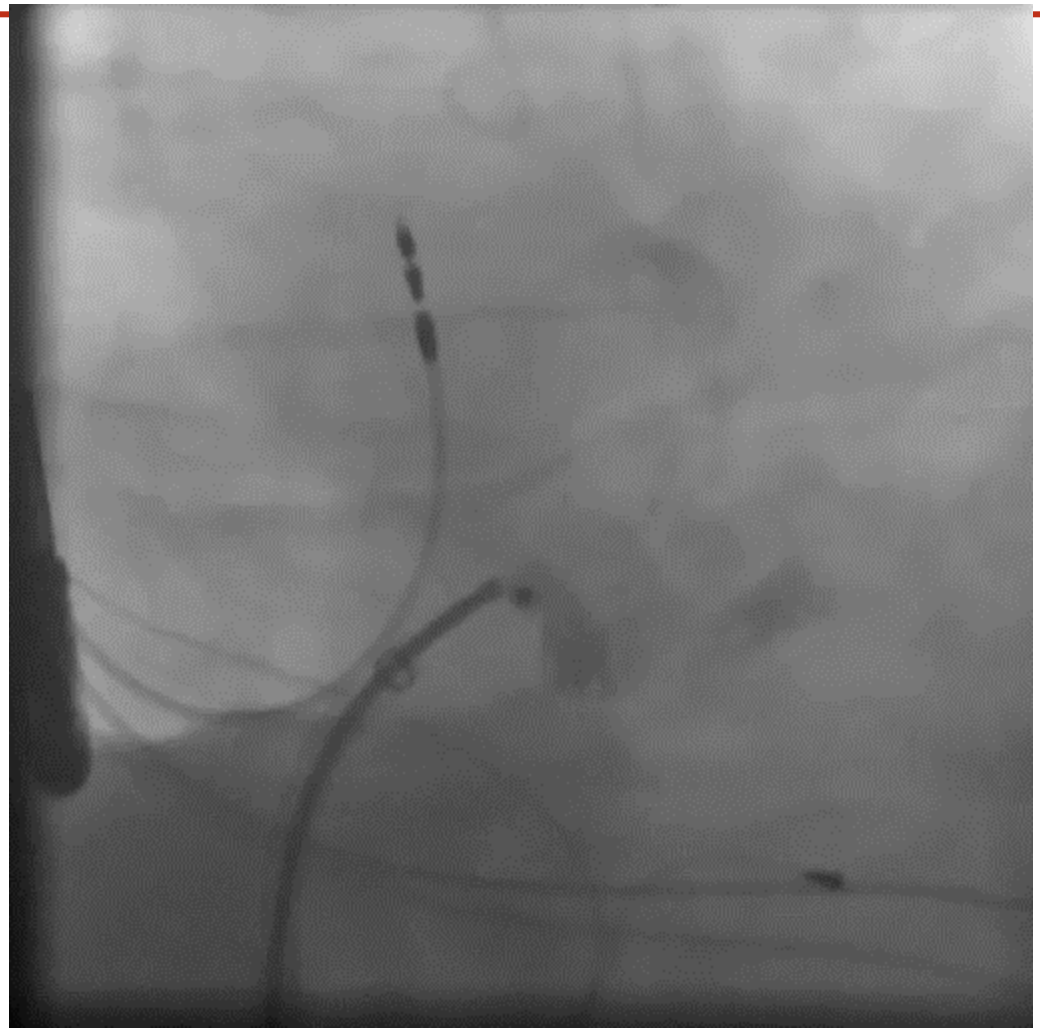
LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



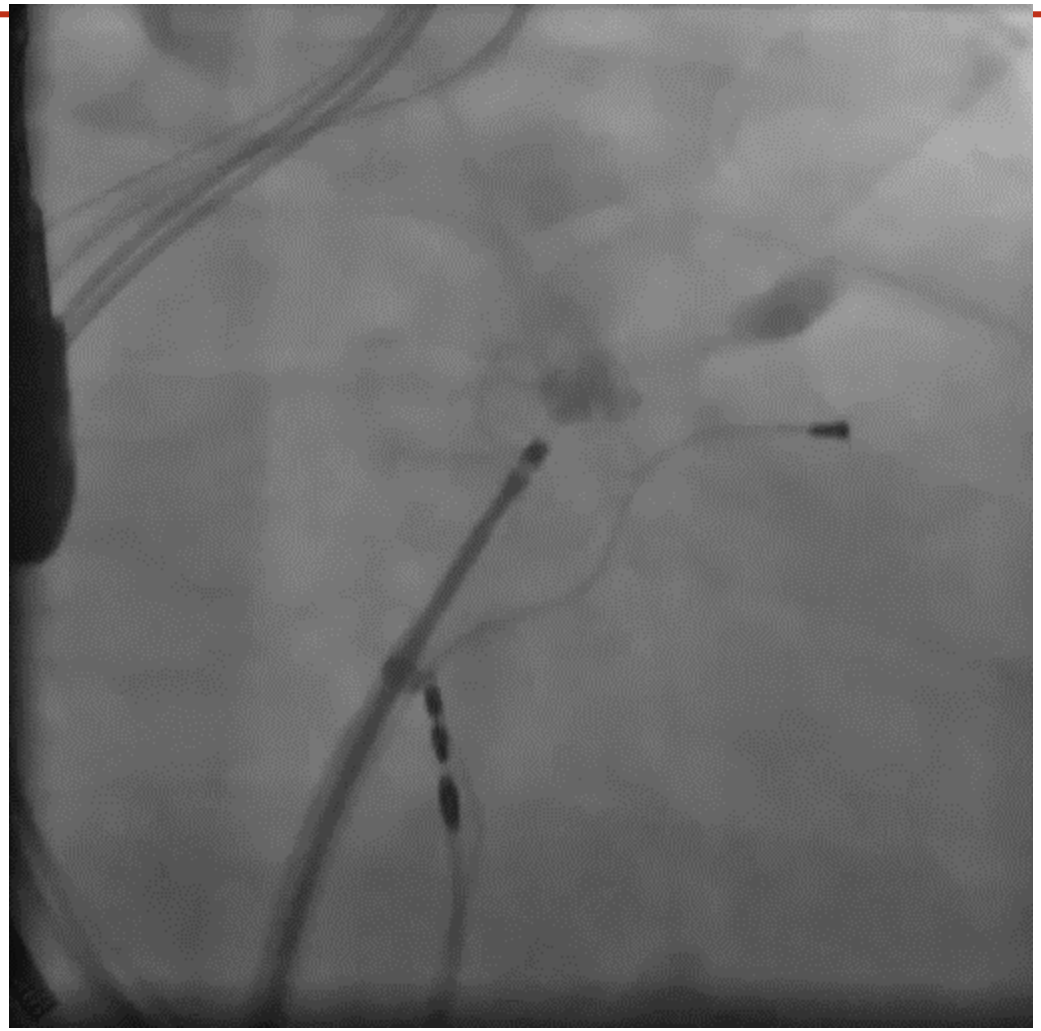
LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



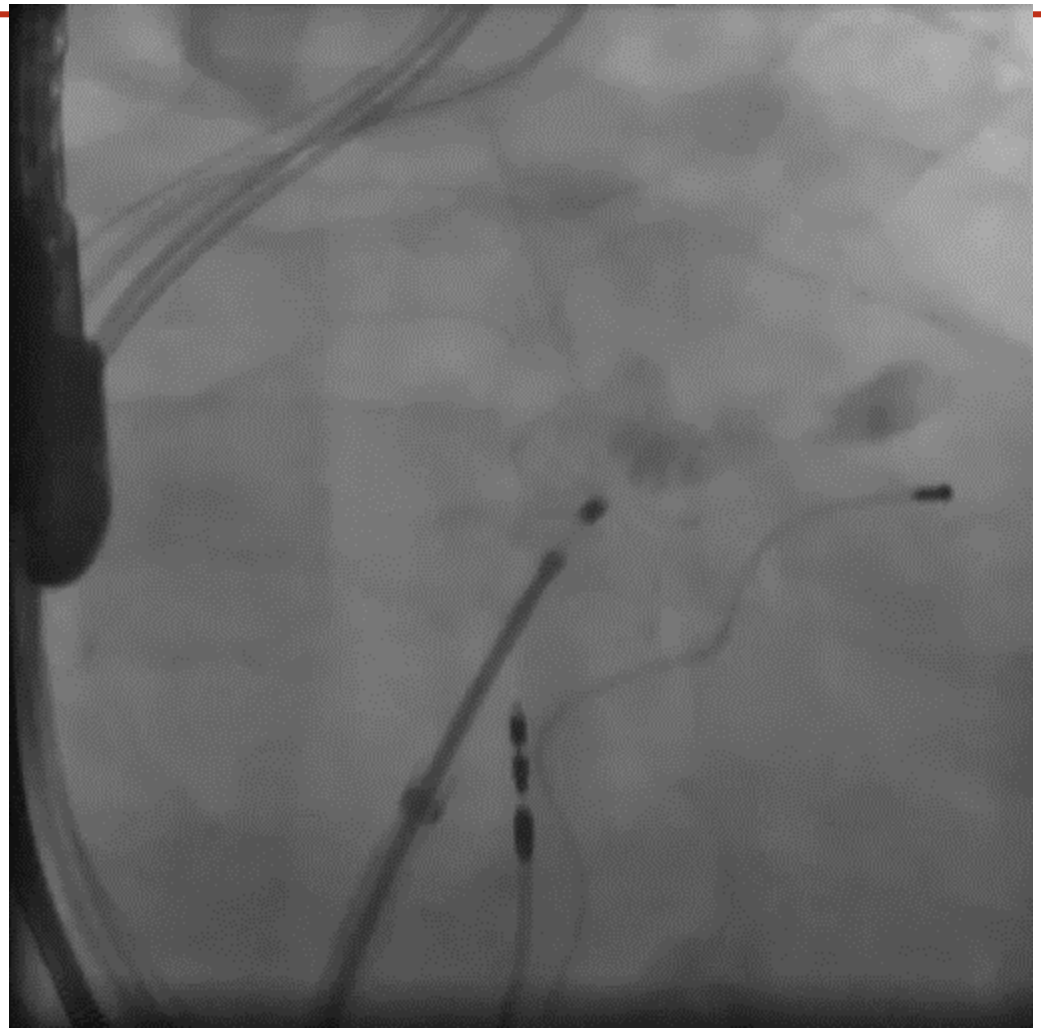
LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



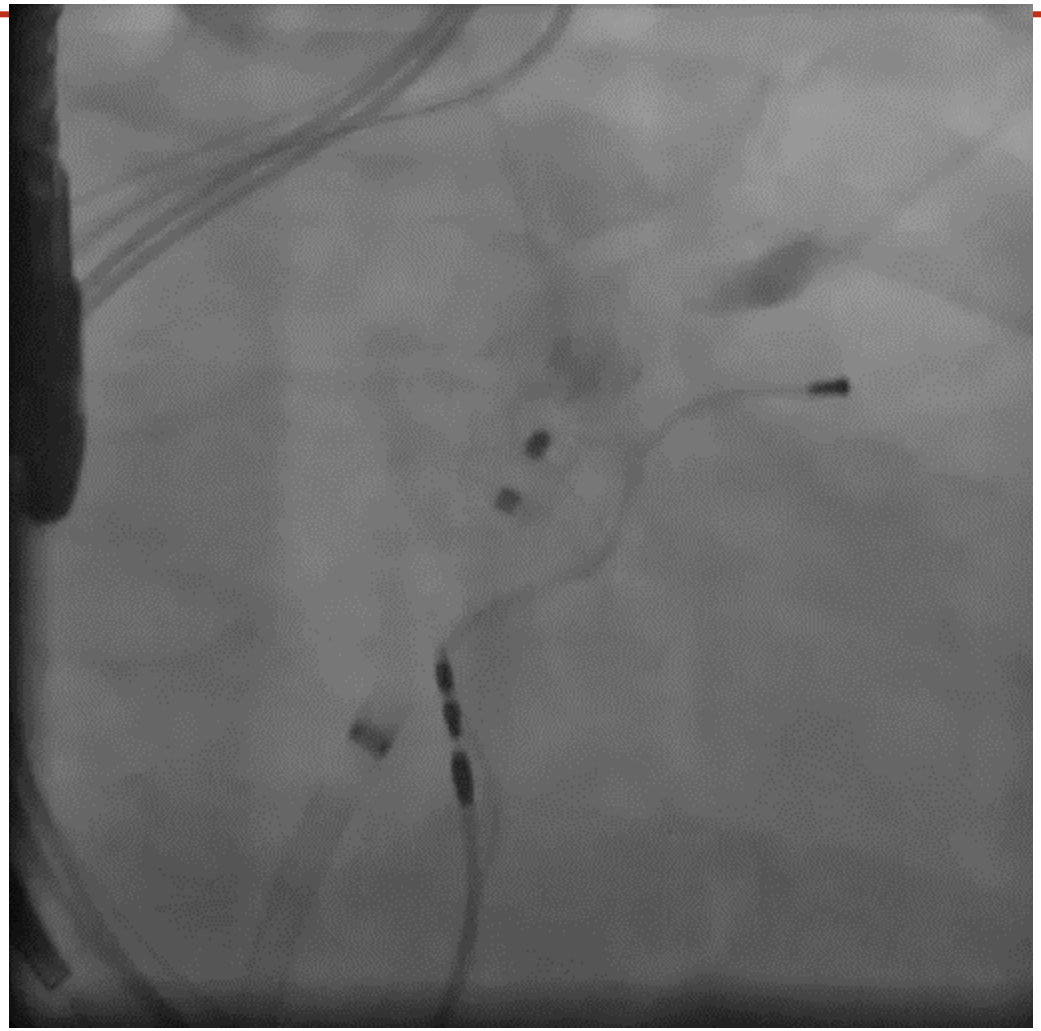
LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



LAmbre LAAO steerable sheath Fustar® for TSP & device delivery



LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

Kleinecke C, Monterrosas OG, …, Shin E-S, et Park J-W. J Interven Cardiol. 2018;1–6.

TABLE 1 Baseline characteristics

	n = 20
Age (years)	76.6 ± 8.4
Male	12 (60%)
BMI (kg/m^2)	30.4 ± 6.9
Permanent atrial fibrillation	11 (55%)
CHA_2DS_2-VASc score	5.0 ± 2
HAS-BLED score	3.7 ± 1.3
Indication for LAAO[a]	
Recent bleeding under OAC	11 (55%)
Increased bleeding risk	5 (25%)
Patients choice	3 (15%)
Stroke under OAC	1 (5%)
Previous stroke/TIA	6 (30%)
Prior myocardial infarction	6 (30%)
Prior PCI/CABG	7 (35%)
Left ventricular ejection fraction (%)	56.4 ±9.2
Arterial hypertension	12 (60%)
Diabetes mellitus 2	6 (46.2%)
GFR (mL/min)	54.7 ± 23.6
Peripheral artery disease	3 (23.1%)
Hyperlipidemia	9 (69.2%)
Patent foramen ovale	None
Atrial septal defect	None

LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

Kleinecke C, Monterrosas OG, …, Shin E-S, et Park J-W. J Interven Cardiol. 2018;1–6.

TABLE 2 Procedural data

	n = 20
Successful implantation	20 (100%)
Transseptal puncture	20 (100%)
Resizing of the device	0
Size of LAmbre device	
16-22 mm	1 (5%)
18-24 mm	1 (5%)
22-28 mm	1 (5%)
22-34 mm	1 (5%)
24-30 mm	2 (10%)
26-32 mm	3 (15%)
28-34 mm	3 (15%)
22-34 mm	1 (5%)
30-26 mm	1 (5%)
30-36 mm	4 (20%)
34-38 mm	1 (5%)
36-40 mm	1 (5%)
LAA diameters	
Orifice (mm)	21.7 ± 6
Landing zone (mm)	21.2 ± 4.7
Depth (mm)	32.9 ± 10.8
Number of LAA lobes	
Single lobe	8 (40%)
Two lobes	6 (30%)
Three lobes	4 (20%)
Four lobes	1 (5%)
Five lobes	1 (5%)
LAA thrombus	None

LAmbre LAAO steerable sheath Fustar® for TSP & device delivery

Kleinecke C, Monterrosas OG, …, Shin E-S, et Park J-W. J Interven Cardiol. 2018;1–6.

Procedure time (min)[a]	23.4 ± 9.2
Fluoroscopy time (min)	11.9 ± 4.1
Contrast media (mL)	96.2 ±45.7
Radiation dose (cG^*cm^2)	2718 ± 3836

Conclusion

5 arguments for using steerable sheath

More controlled and precise landing of the device

More controlled and atraumatic advance of sheath into LAA

Using one cath for TS-access and device delivery and no need for repositioning

Simple and forgiving unprecise TSP-site

➡ ***Easy, safe, and fast LAAO procedure***