

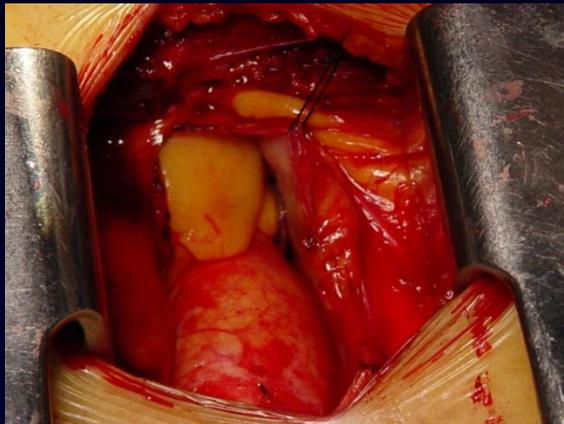
Medtronic CoreValve: Transfemoral Approach

Myeong-Ki Hong, MD. PhD

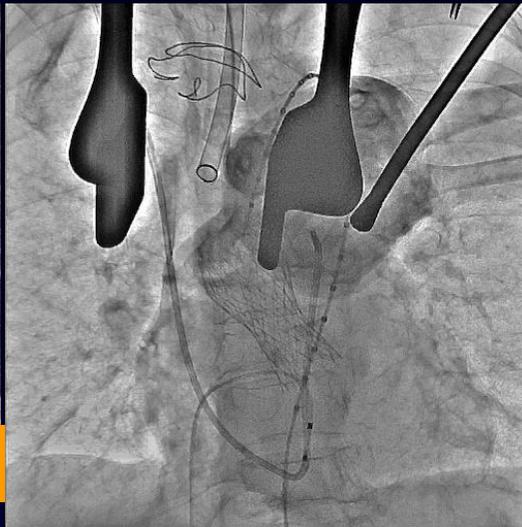
Professor of Medicine

**Cardiology Division, Severance Cardiovascular Hospital
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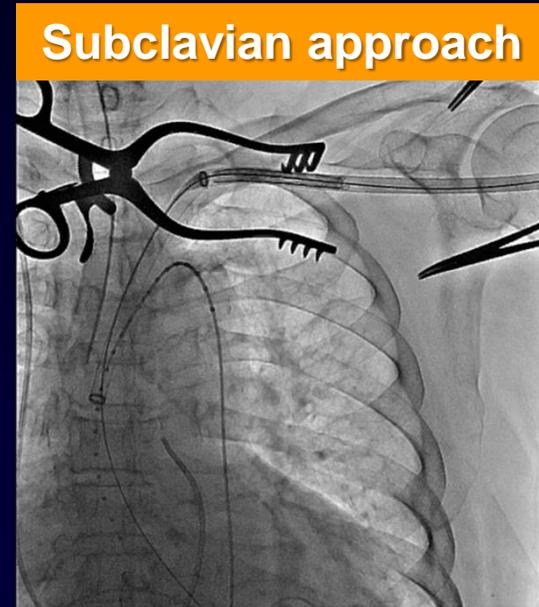
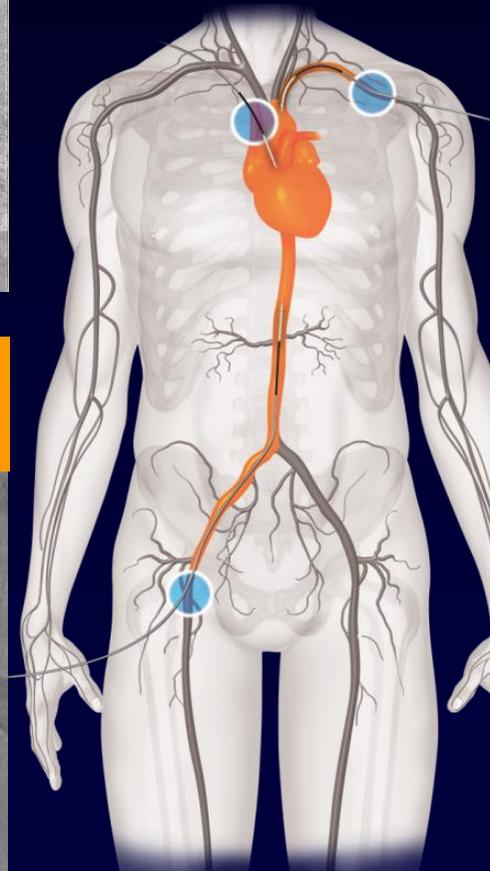
Access sites for CoreValve



Transaortic approach



Transfemoral approach



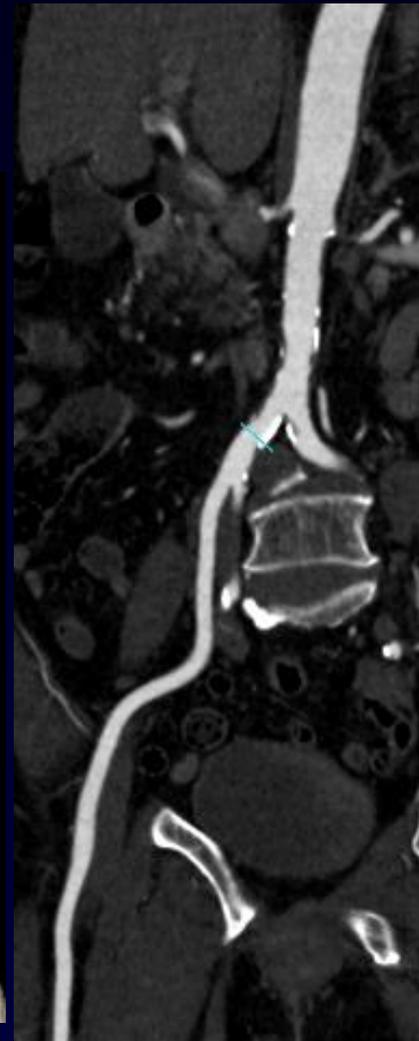
Subclavian approach

Classic case

- F / 77
- Exertional dyspnea
NYHA III
- Hypertension
- Dyslipidemia
- Logistic EuroScore
11.07%



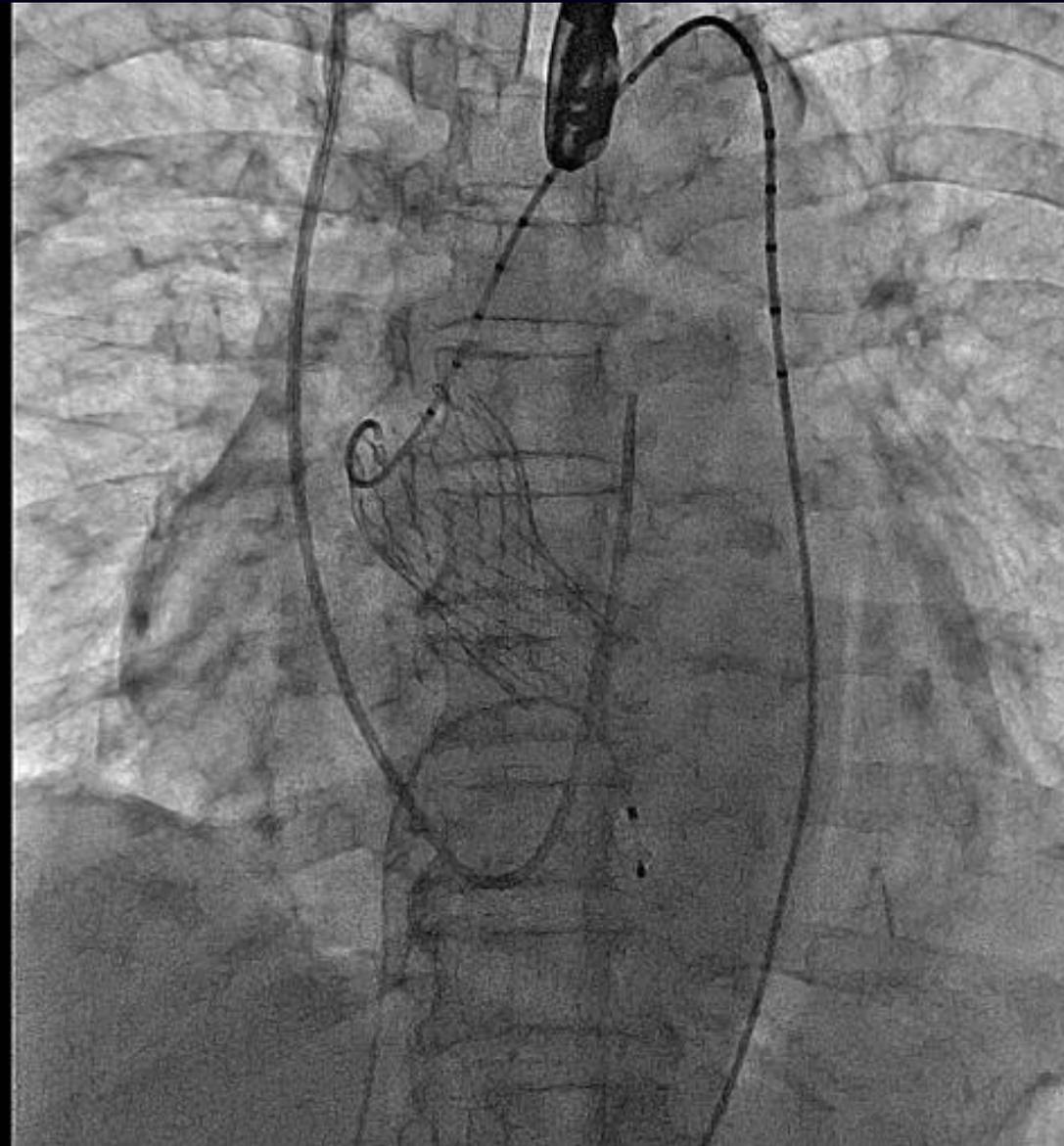
Access site evaluation



	Right	Left
Iliac	7.8 x 7.8	6.6 x 6.4 mm
Femoral	6.1 x 5.8 mm	6.2 x 6.2 mm

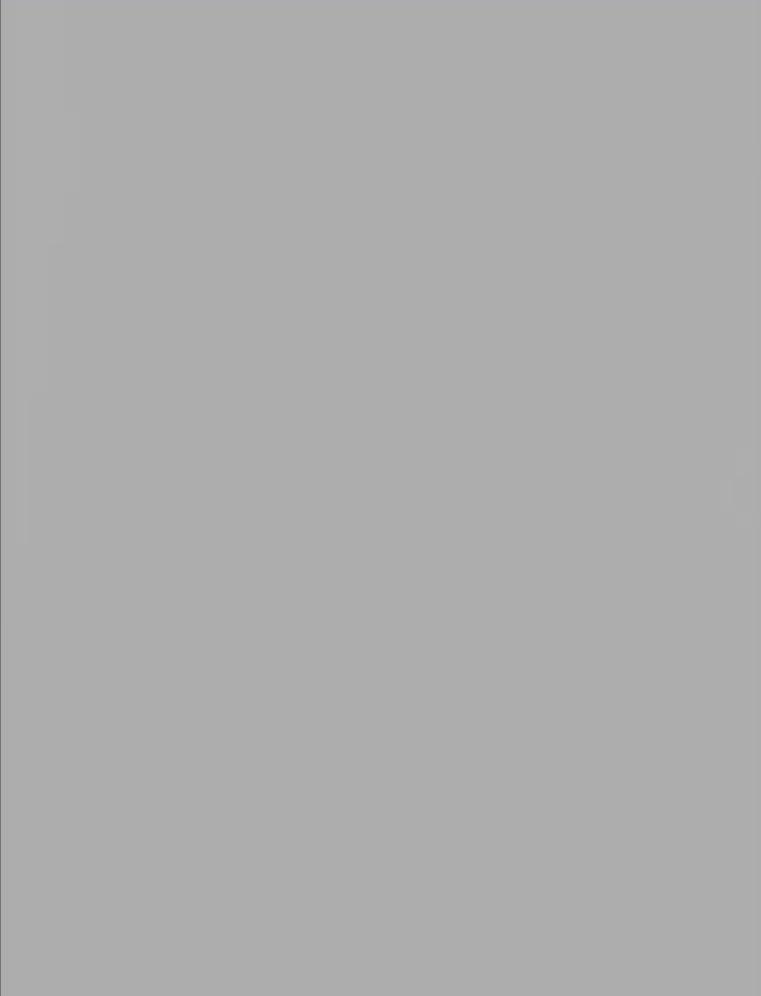


**Rt. CFA puncture
under the pigtail catheter guidance**



CoreValve 26 mm

Final access site evaluation



**Percutaneous closure
with 2 ProGlides**

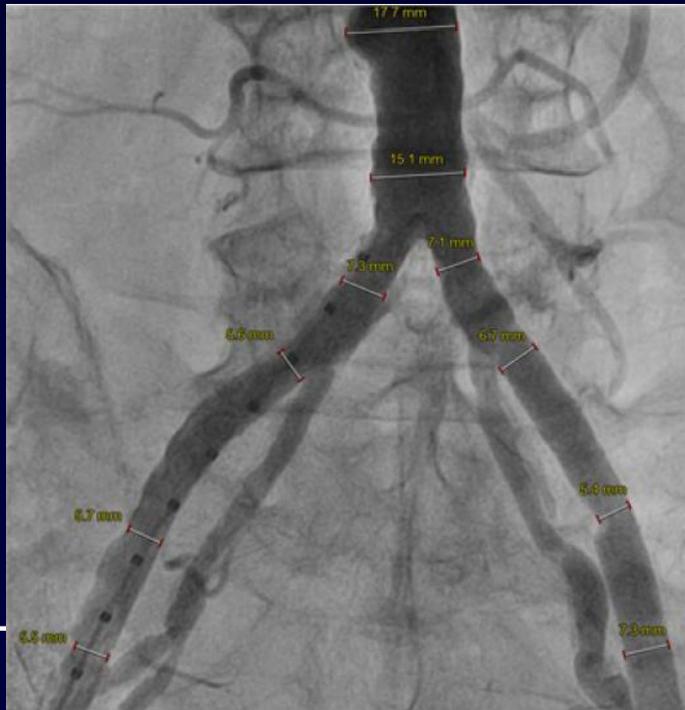
Final access site evaluation



**Percutaneous closure
with 1 ProGlide**

Surgical cut down

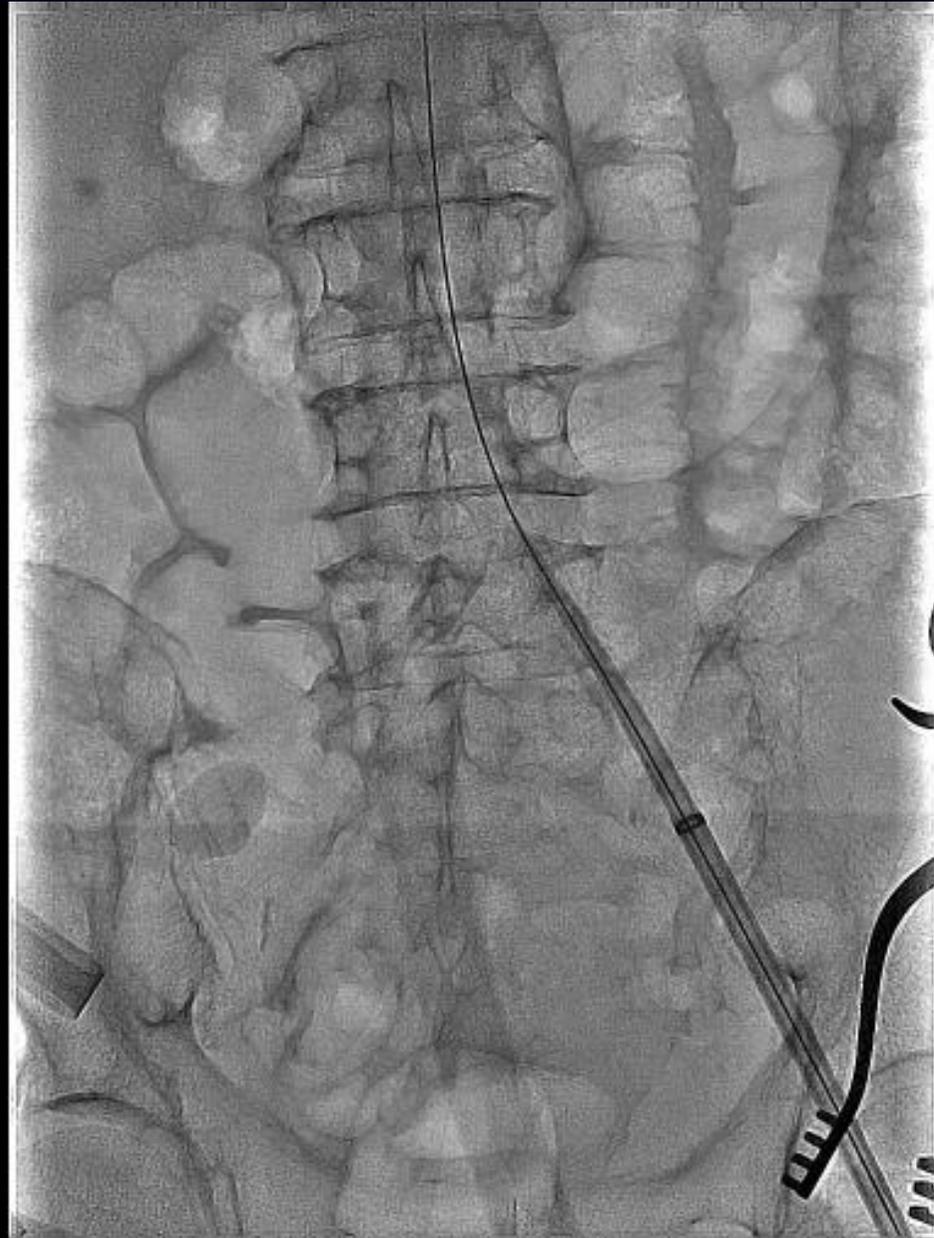
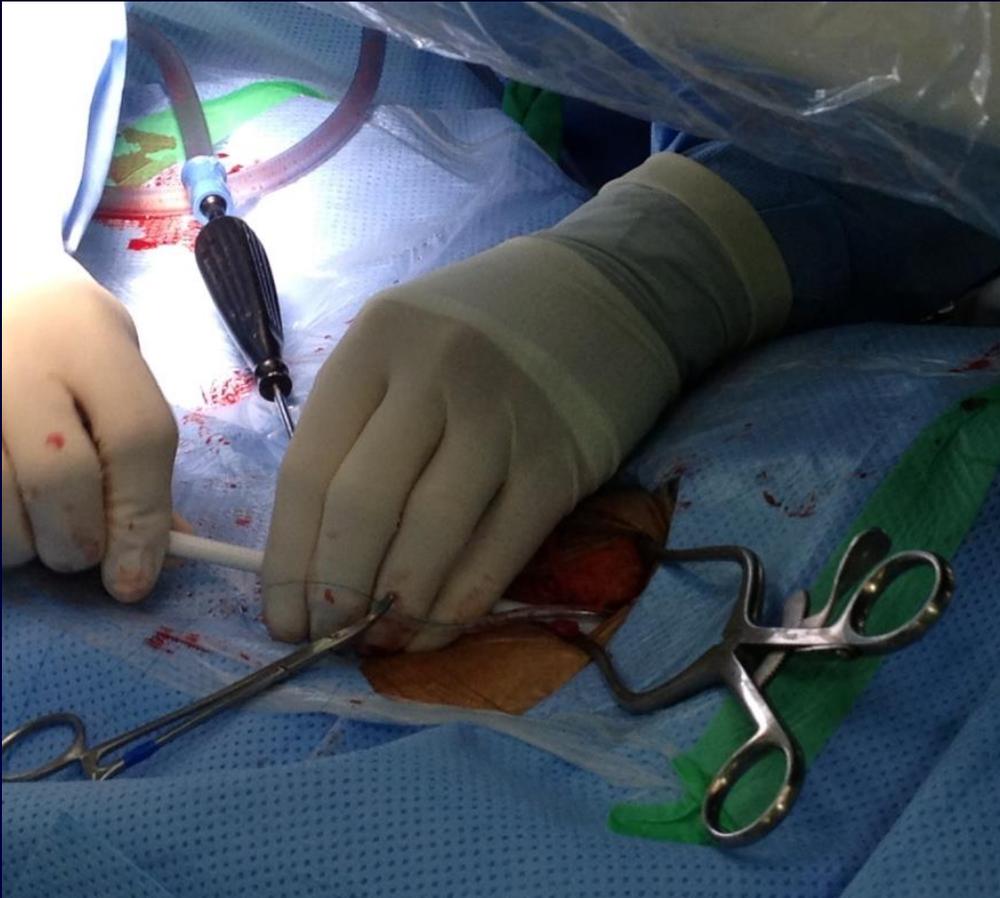
- 80 / M
- Exertional dyspnea, NYHA II
- Hypertension, Dyslipidemia
- S/P PTCA at LAD, LCX and RCA
- EuroScore = 9.2%

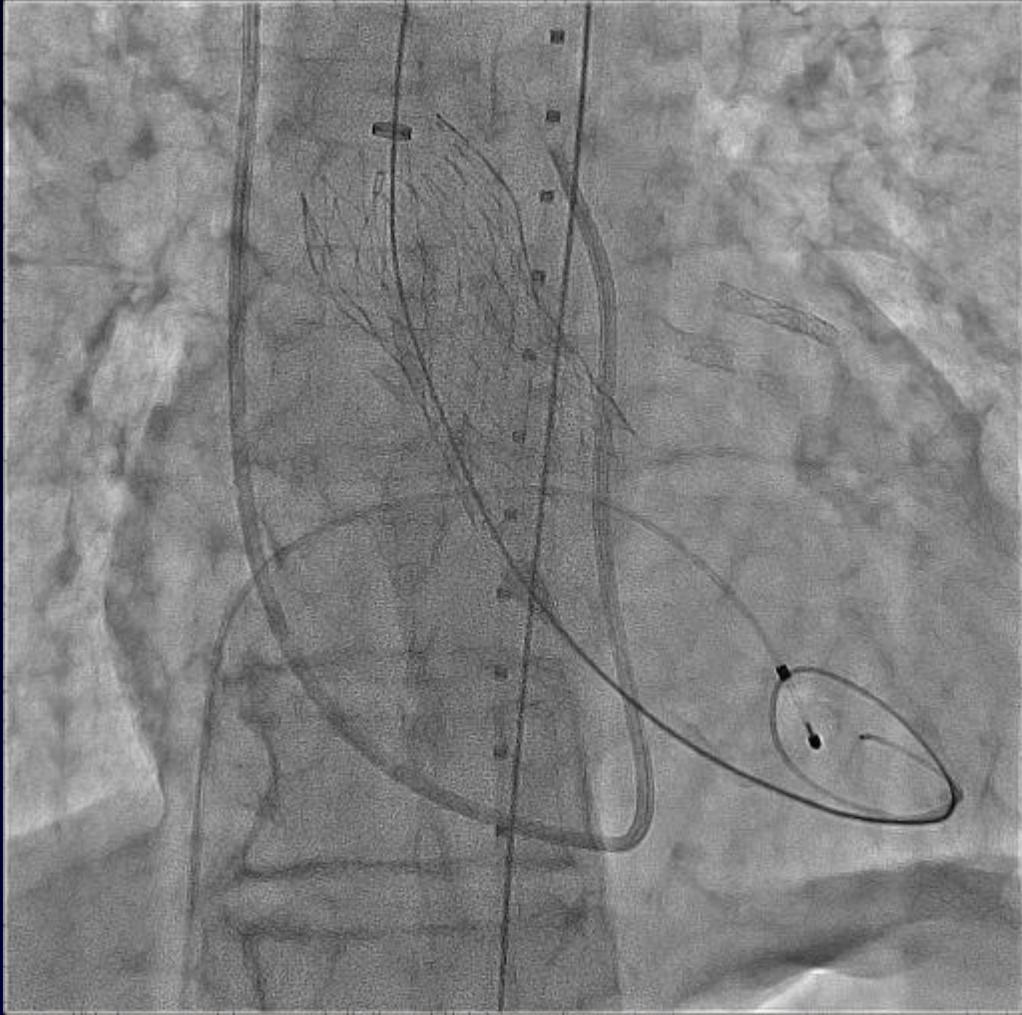


Irregular and small arteries
Calcified arteries

	Right	Left
Iliac	4.5 – 7.5 mm	4.0 – 7.5 mm
Femoral	4.5 x 7 mm	5 mm

Both. Iliac and femoral arteries had severe calcification
→ Lt. CFA was punctured under surgical cut down





CoreValve 29 mm

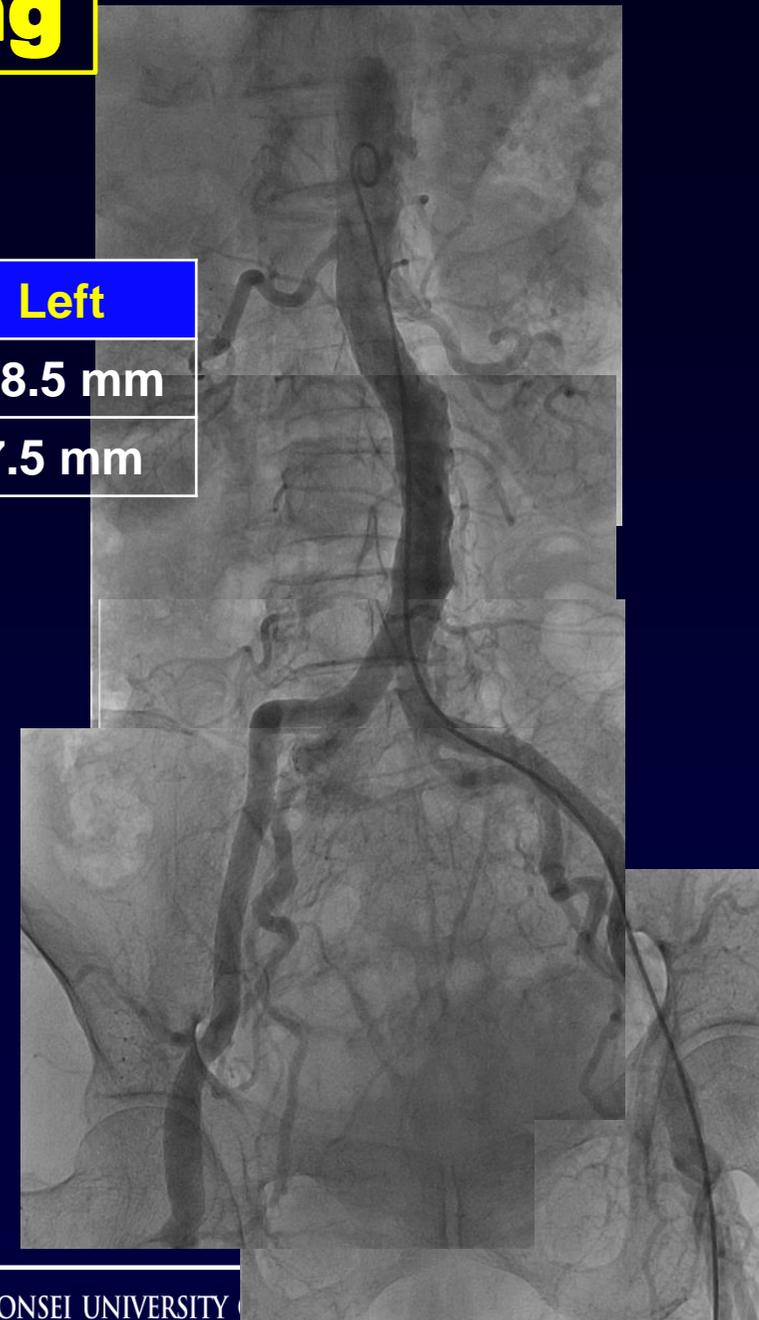
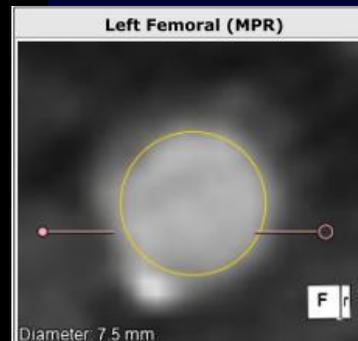
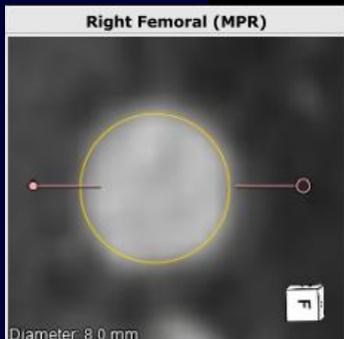
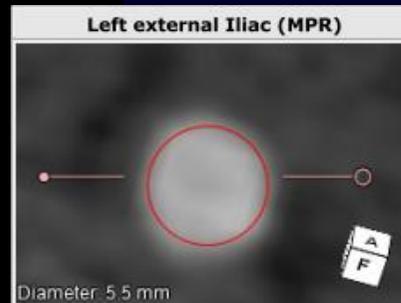
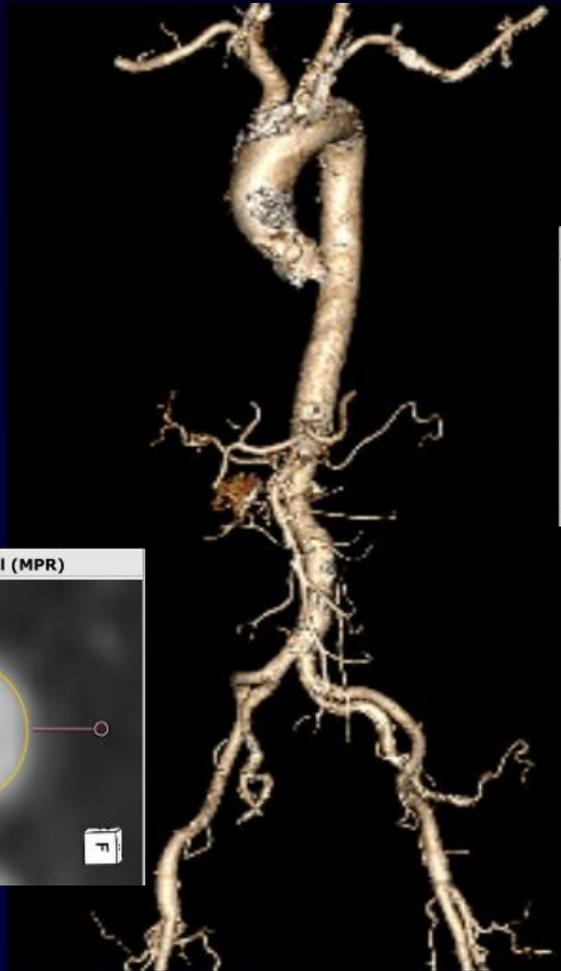


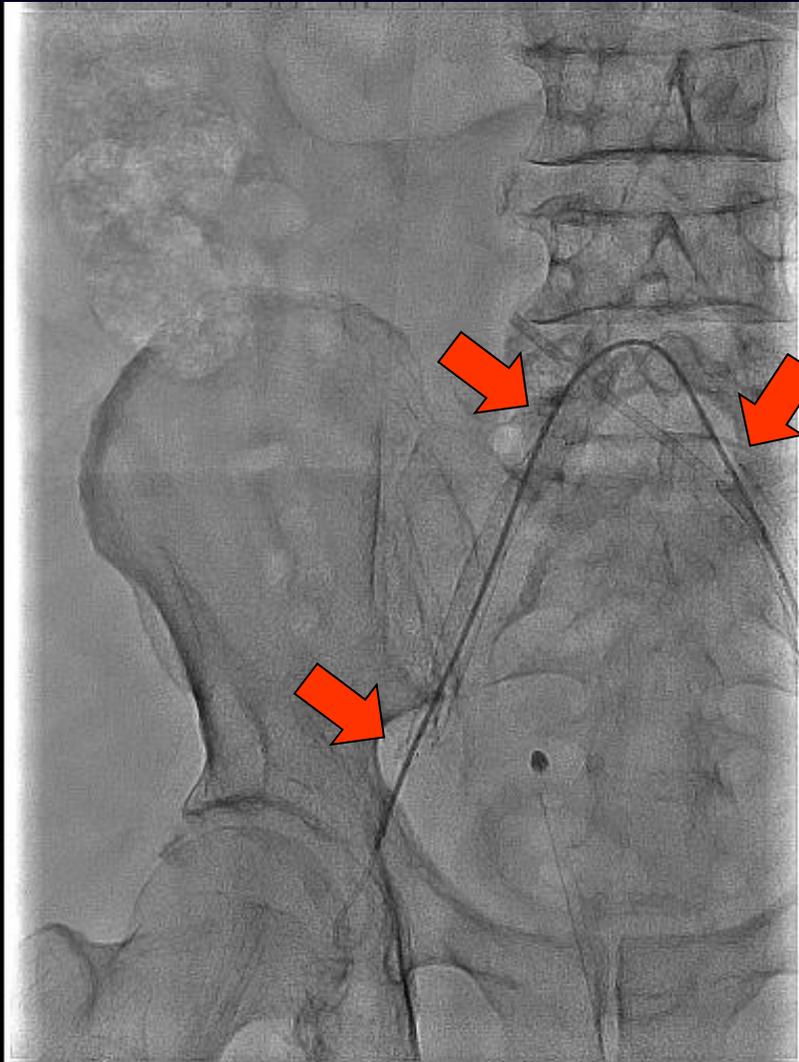
After vessel repair

PHx of both iliac stenting

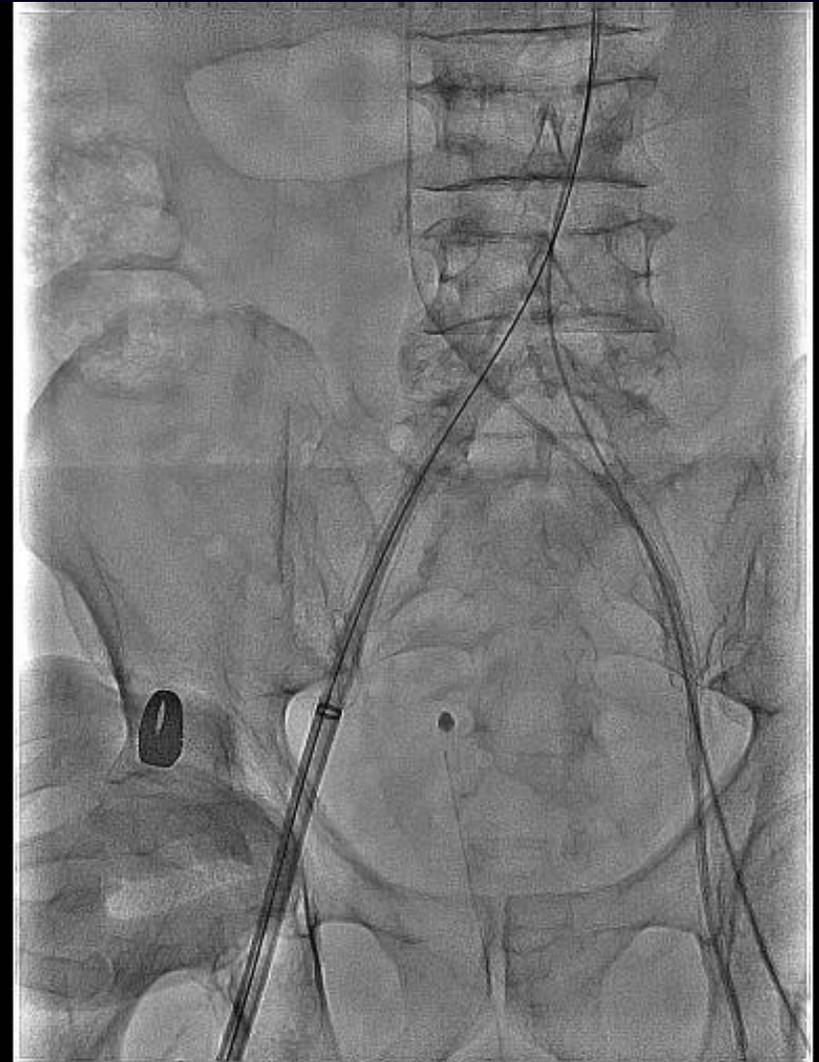
- F/ 82
- Exertional dyspnea, NYHA III
- Hypertension, Dyslipidemia

	Right	Left
Iliac	6-8.5 mm	6-8.5 mm
Femoral	8 mm	7.5 mm





Pigtail catheter guided right CFA puncture



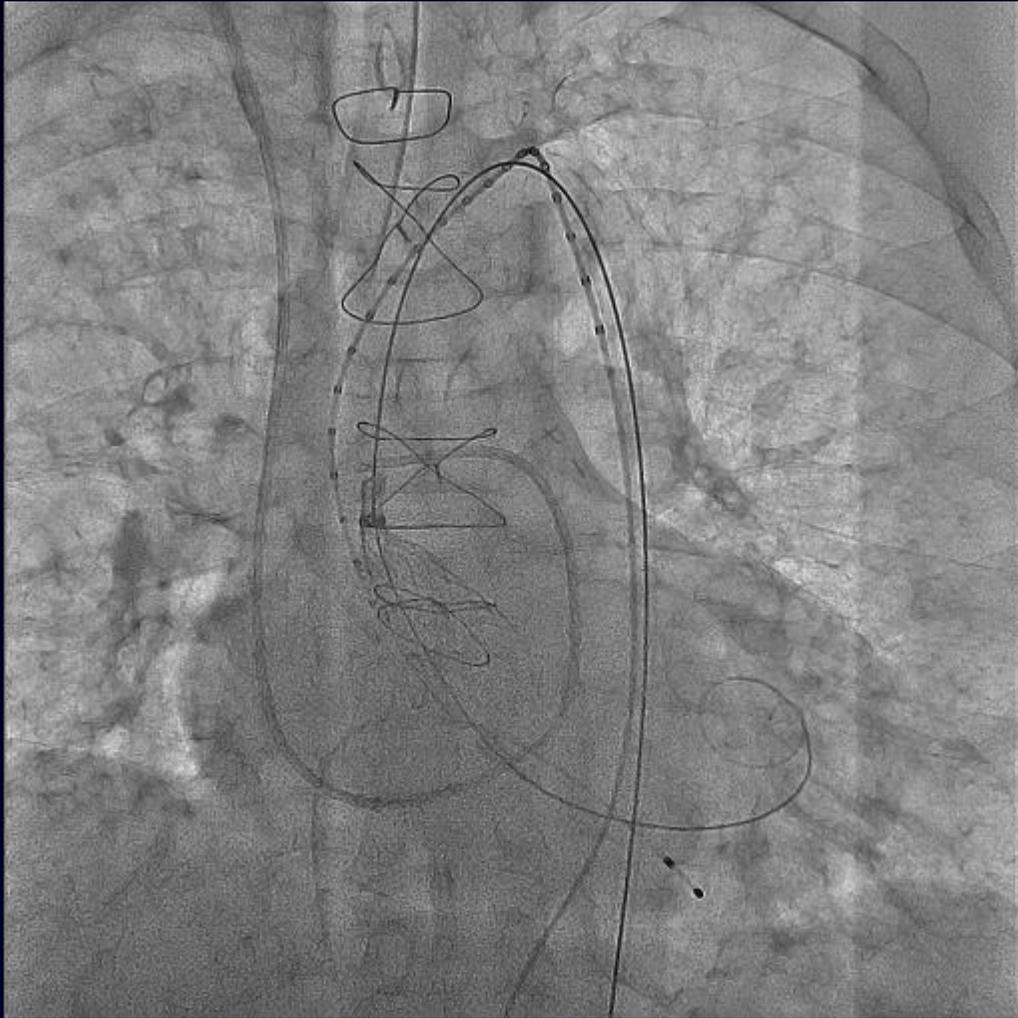
Hard to pass the iliac stent



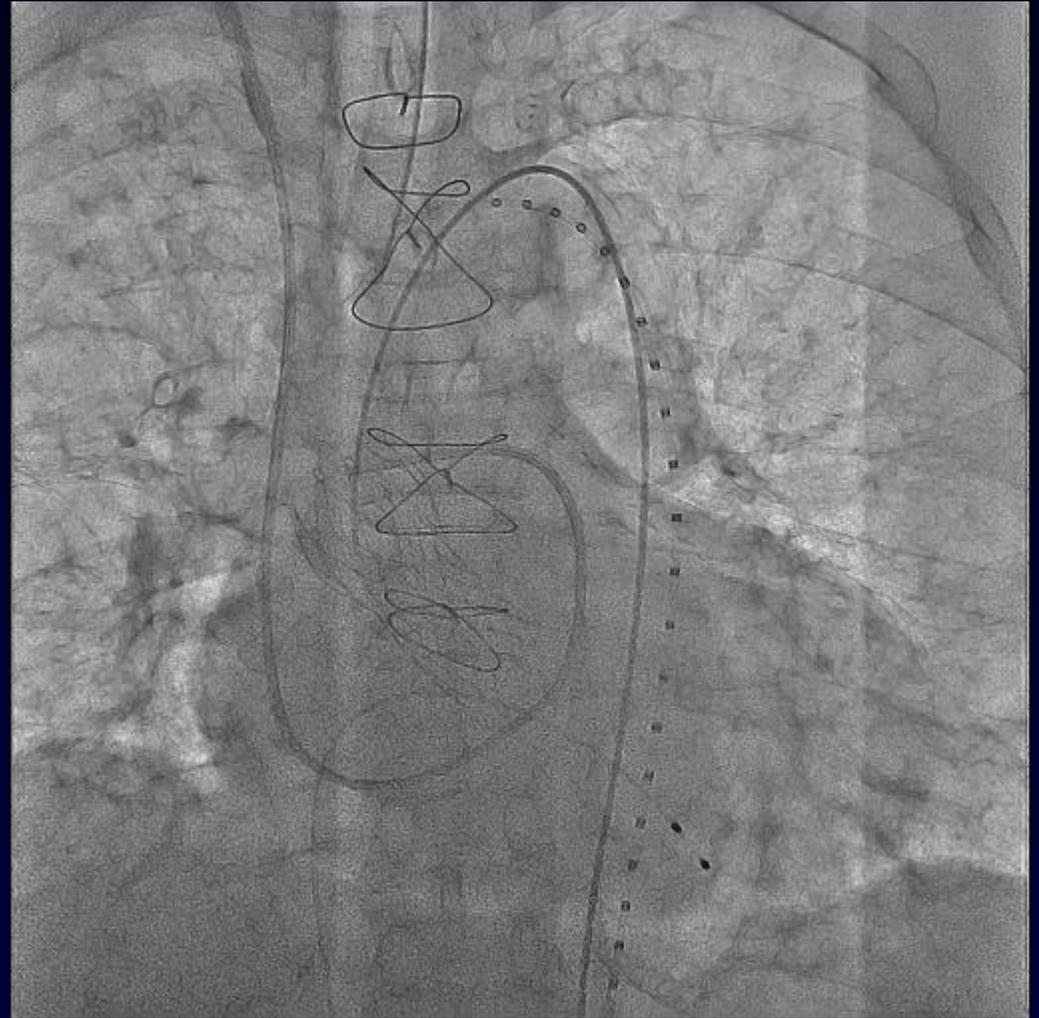
S/P Ballooning at previous iliac stents



After ballooning

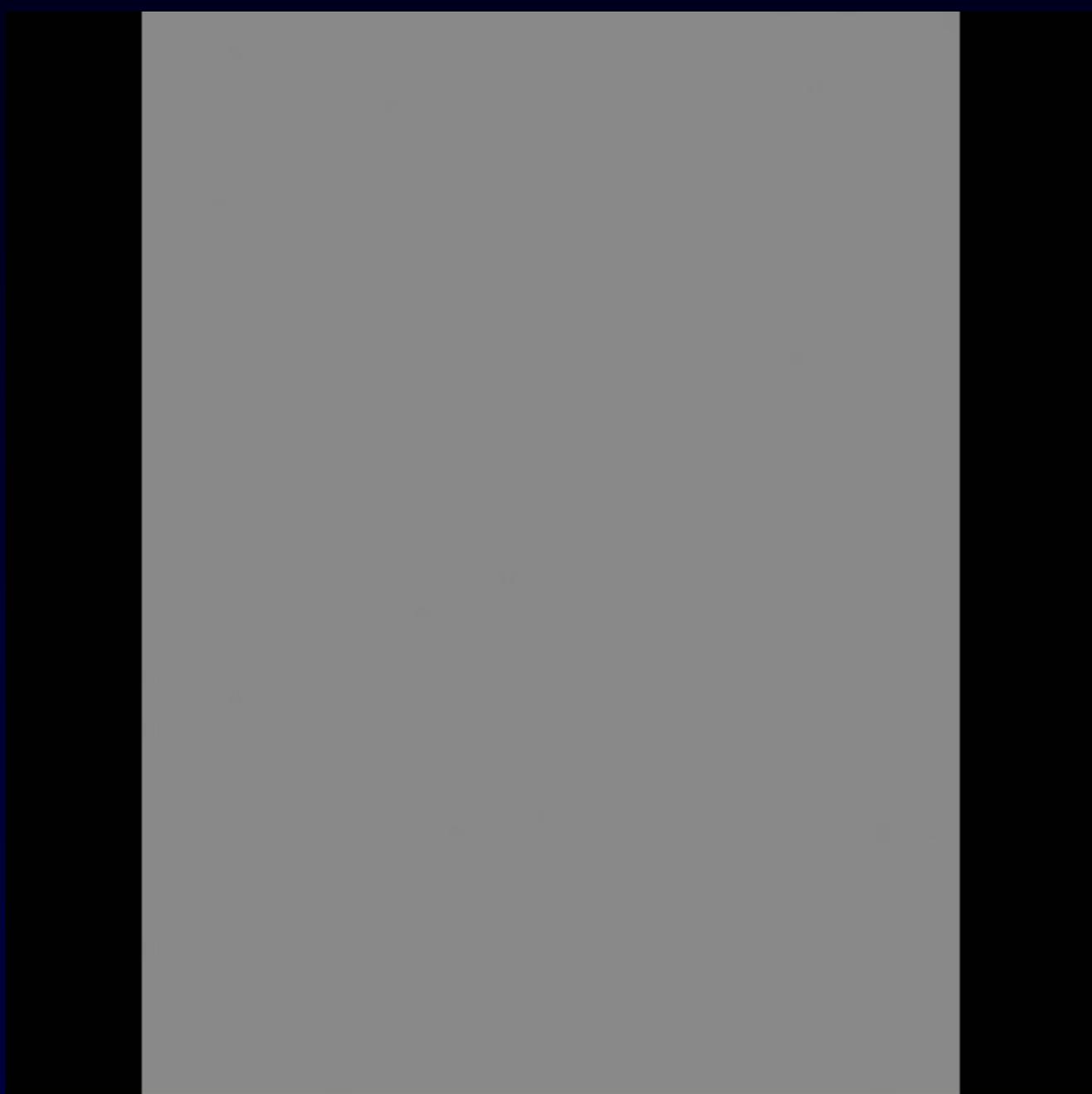


CoreValve 29 mm



After deployment

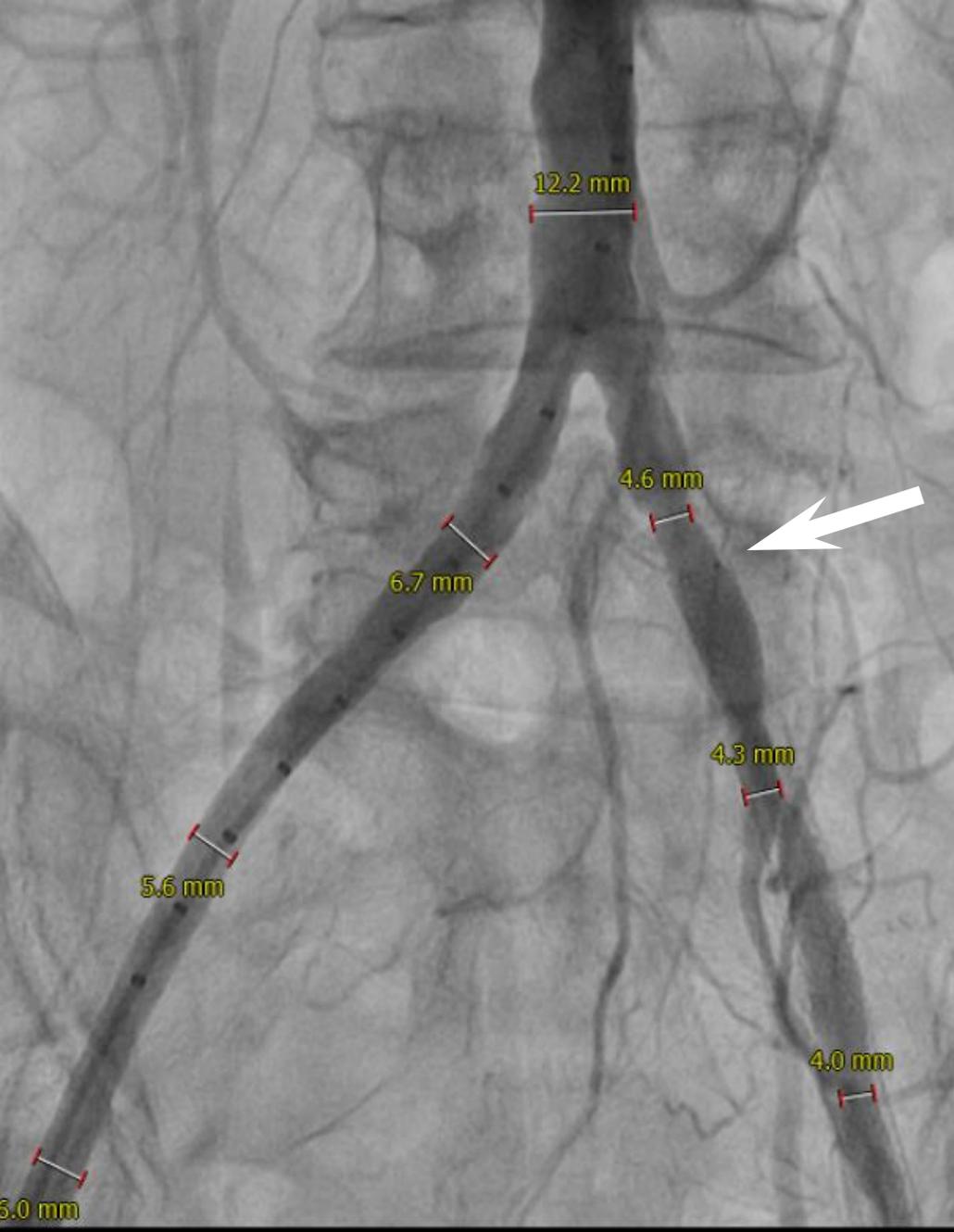
Final access site angiography



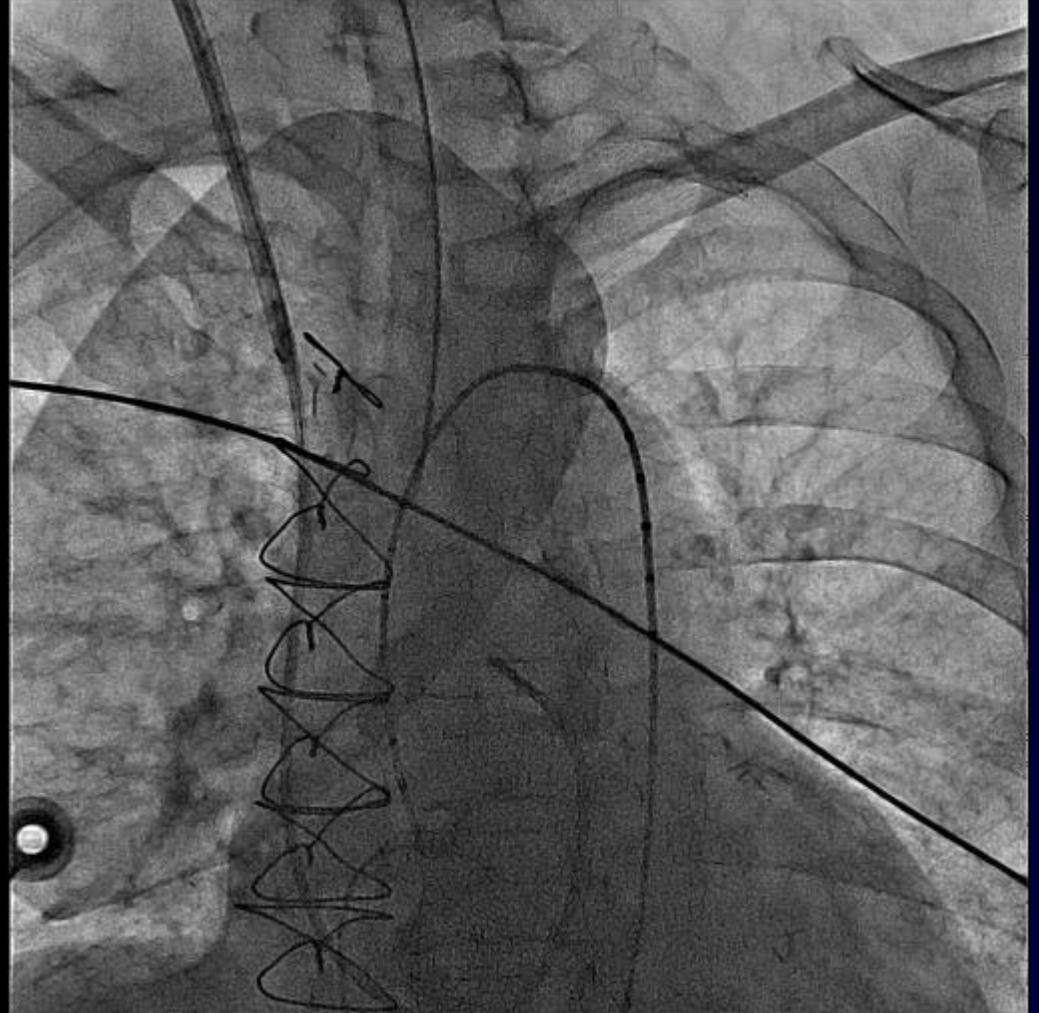
Suspected severe calcification of iliac artery

- 67 / M
- Chief complaint:
Exertional dyspnea, NYHA III
- Comorbidities:
Hypertension (+) Diabetes (+)
s/p redoCABG (2002.8, 2010.7)
PAD
s/p stent at left EIA (2008.7)
Prior CVA, left MCA infarct (2010.8)
- Logistic Euroscore = 46.82%, Euroscore II = 11.53%
- STS score = 5.931%

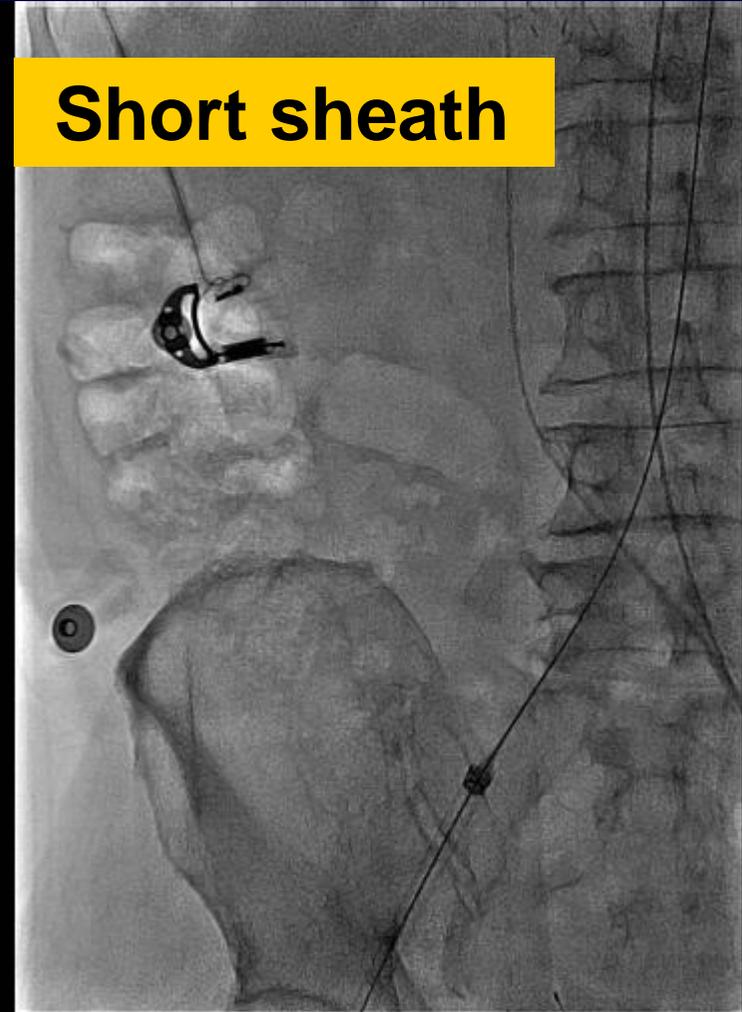




Procedure

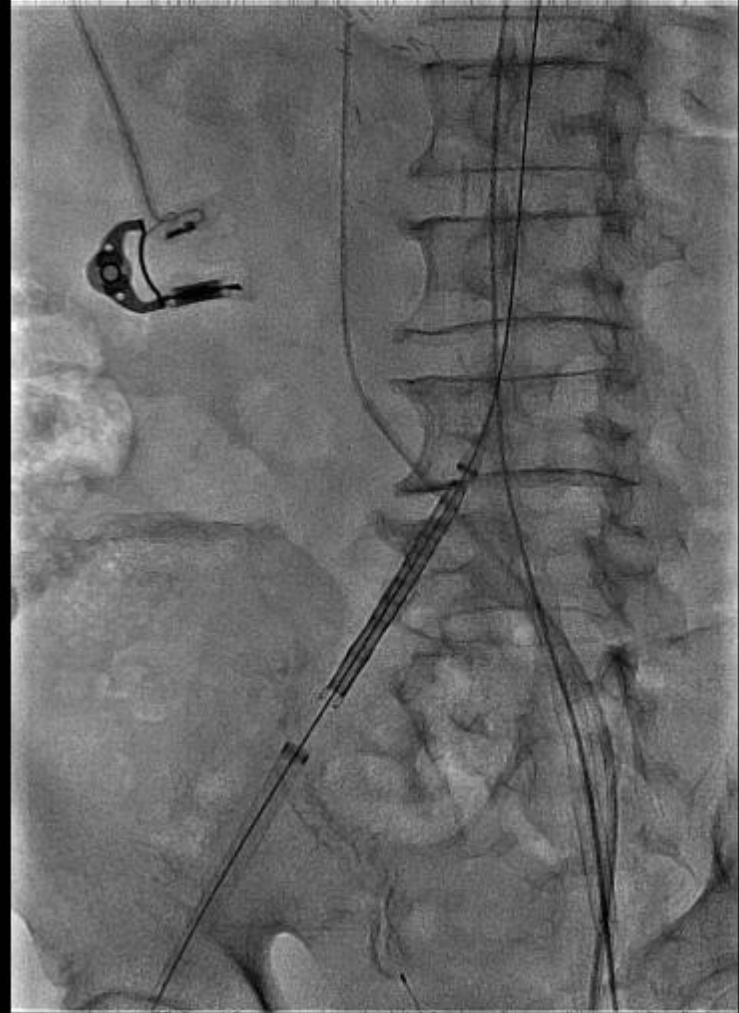
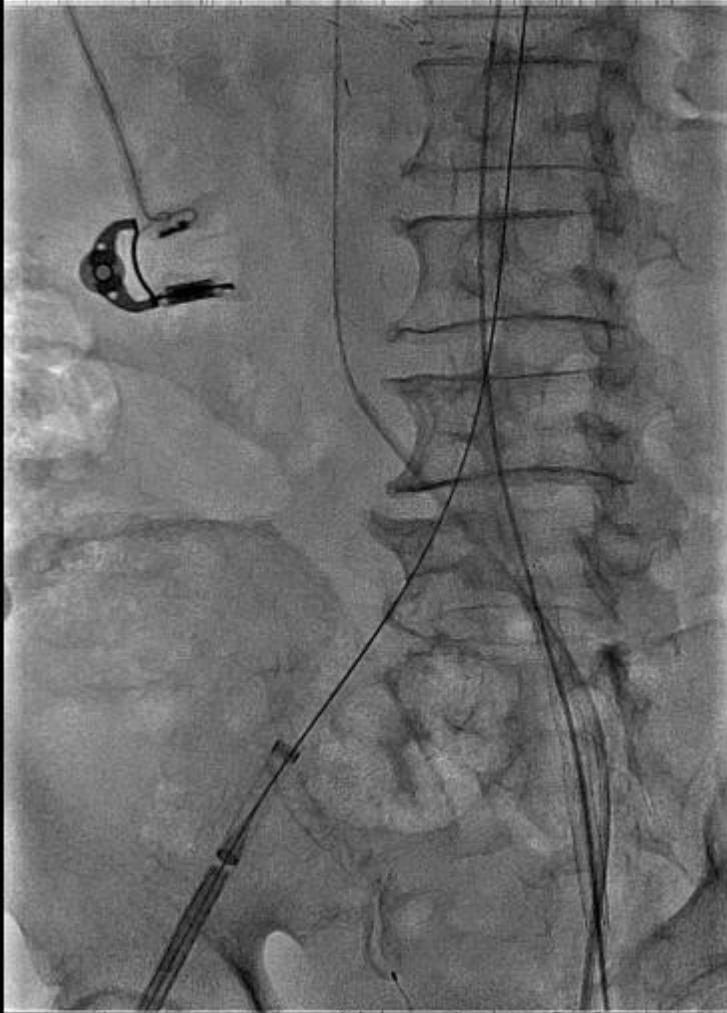


Short sheath

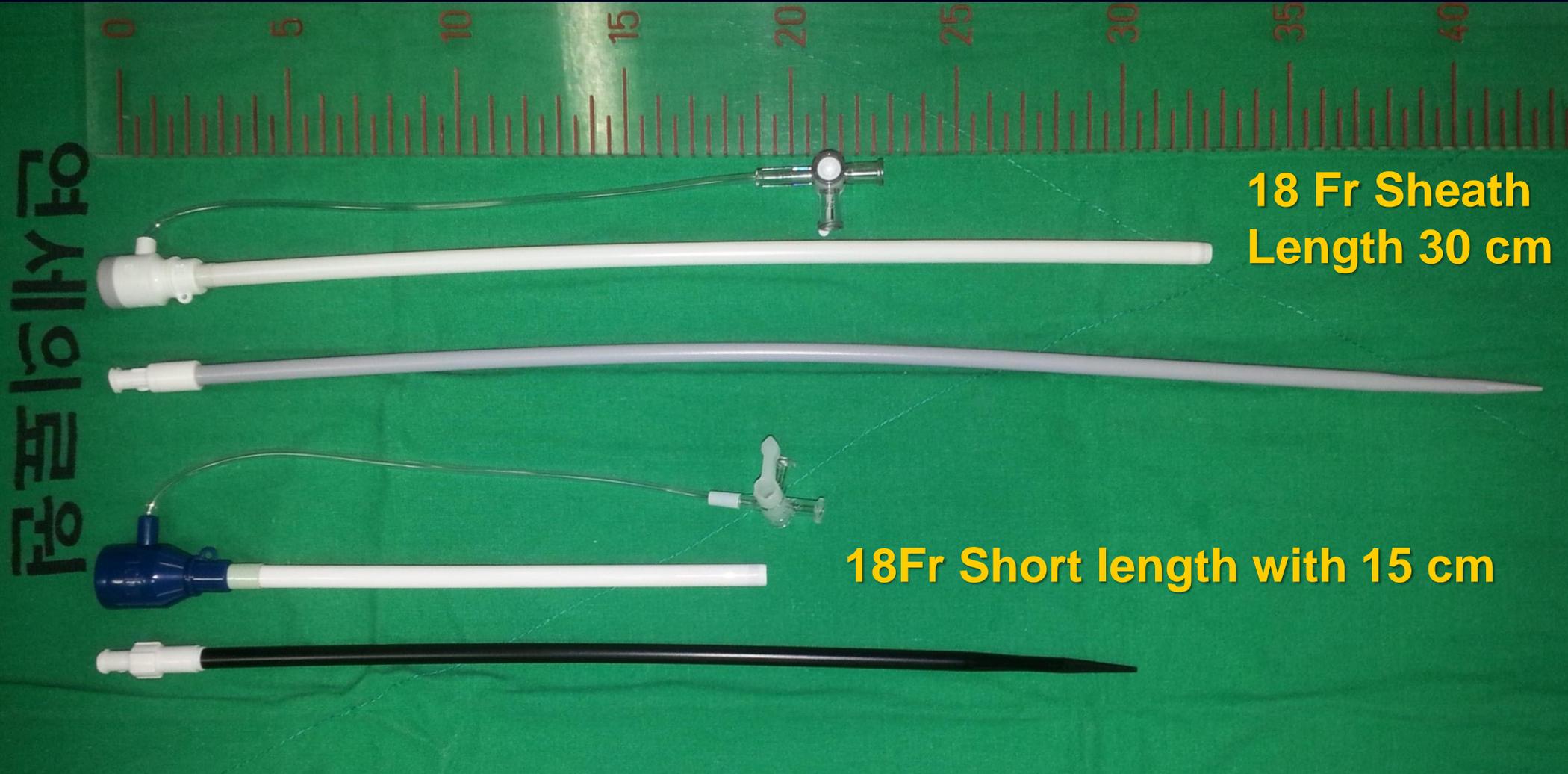


Testing without loading of CoreValve

Procedure



Short sheath



18 Fr Sheath
Length 30 cm

18Fr Short length with 15 cm

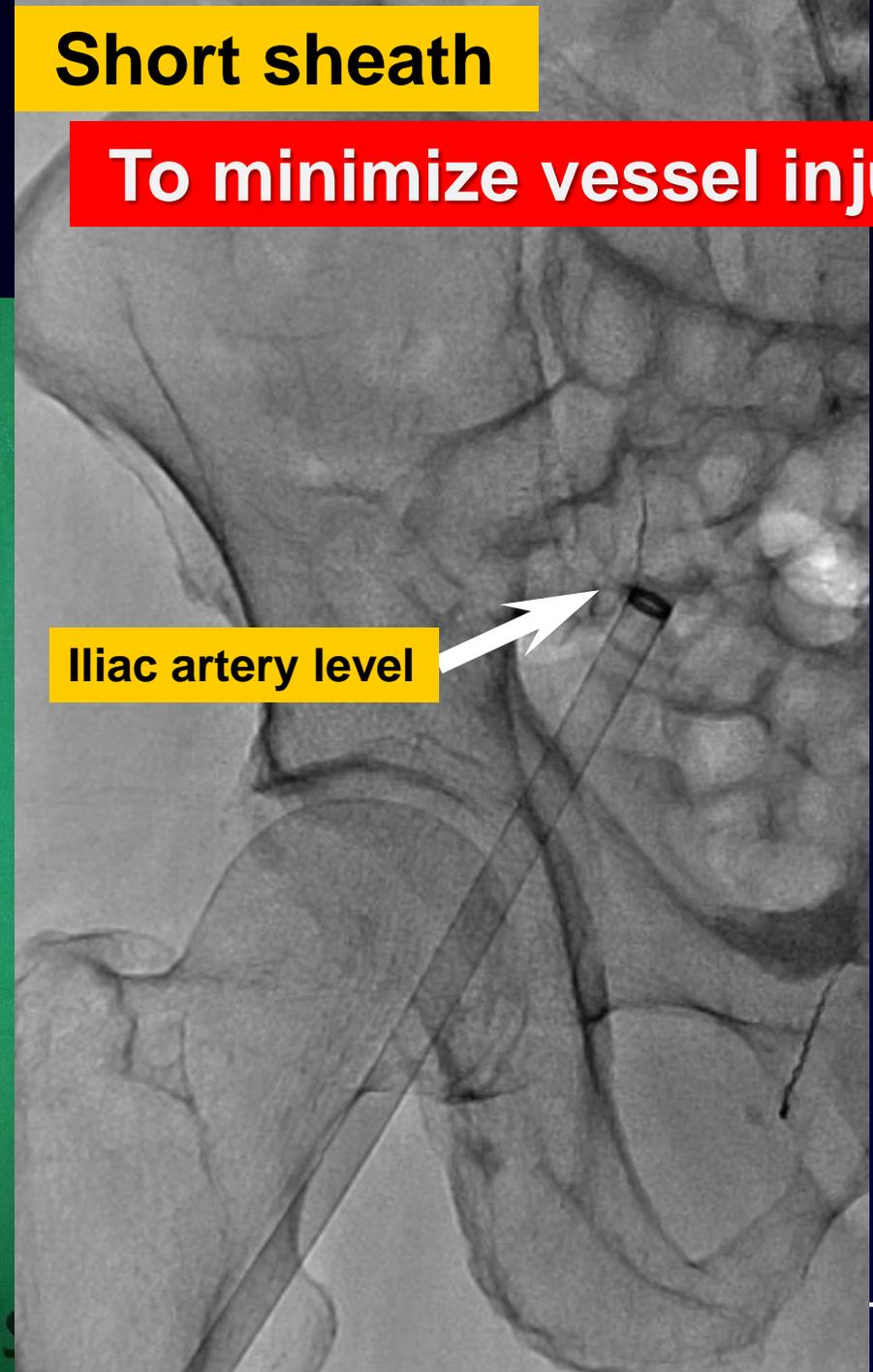
Long sheath



Renal artery level

Short sheath

To minimize vessel injury



Iliac artery level



Small-sized (<6 mm) iliac artery

#1807891 LYJ

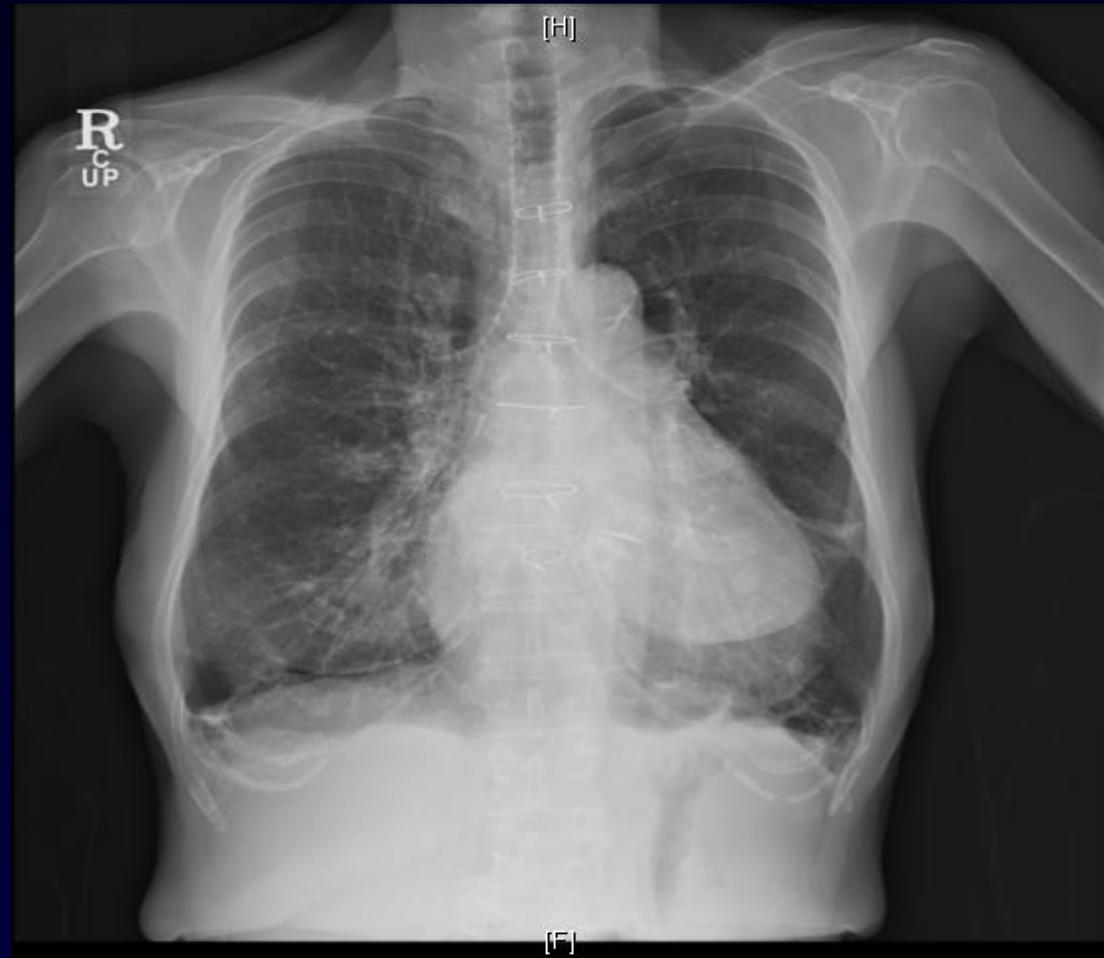
- 75 / M
- Chief complaint:
DOE, NYHA 3

- Comorbidities:

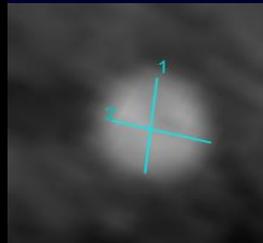
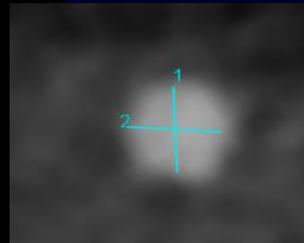
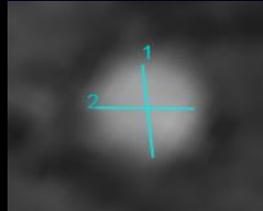
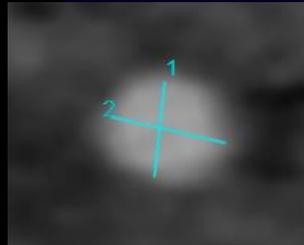
s/p MVR d/t MS

Hypertension

Additive / Logistic EuroScore 9/10.8



Access site evaluation



	Right	Left
Iliac	5.1 x 5.6 mm	5.3 x 5.6 mm
Femoral	5.6 x 5.7 mm	6.4 x 6.0 mm

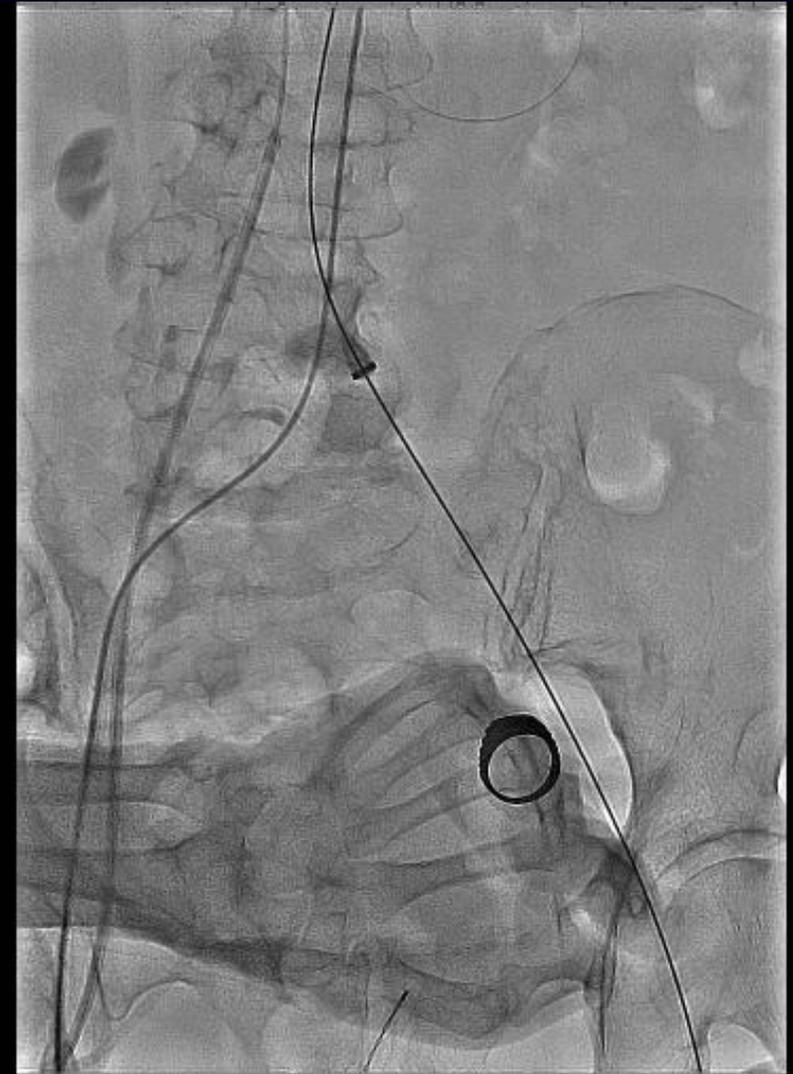
Procedure



The size of left iliac artery was smaller than our expectation.



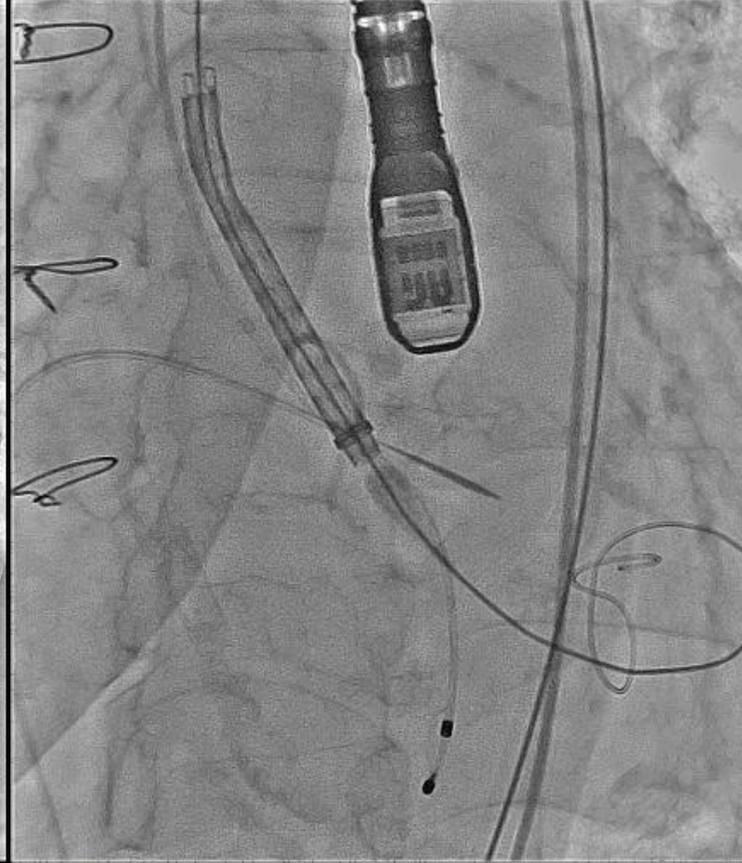
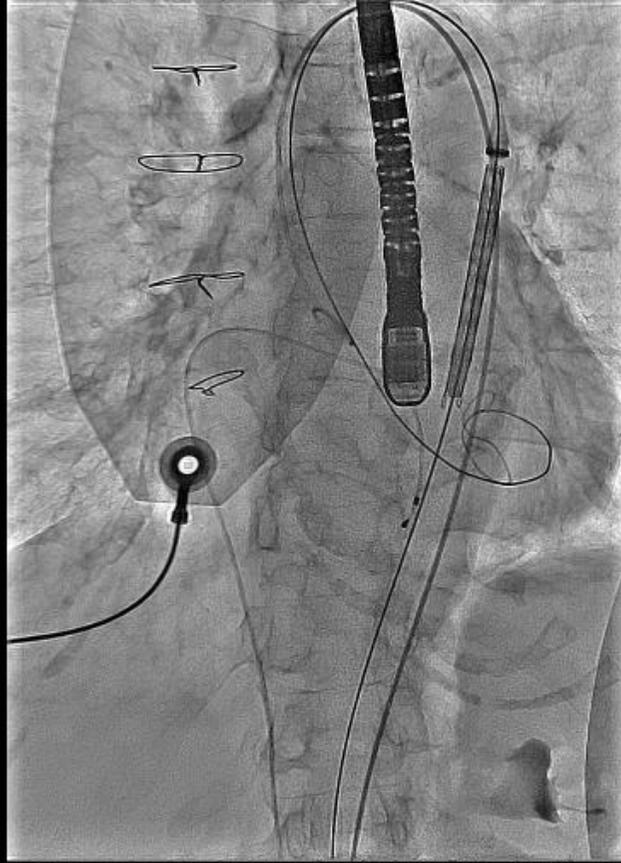
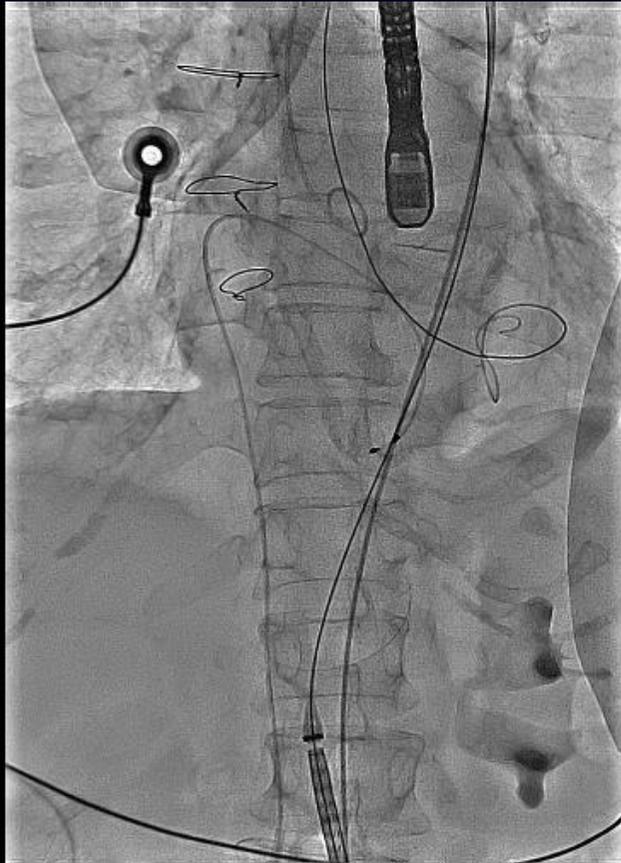
Test with 14 Fr sheath



Core valve delivery system

**Left iliac artery was not enough big for the 18Fr sheath to pass through
Only valve delivery system without 18 Fr sheath was able to pass through the left iliac artery**

No sheath procedure

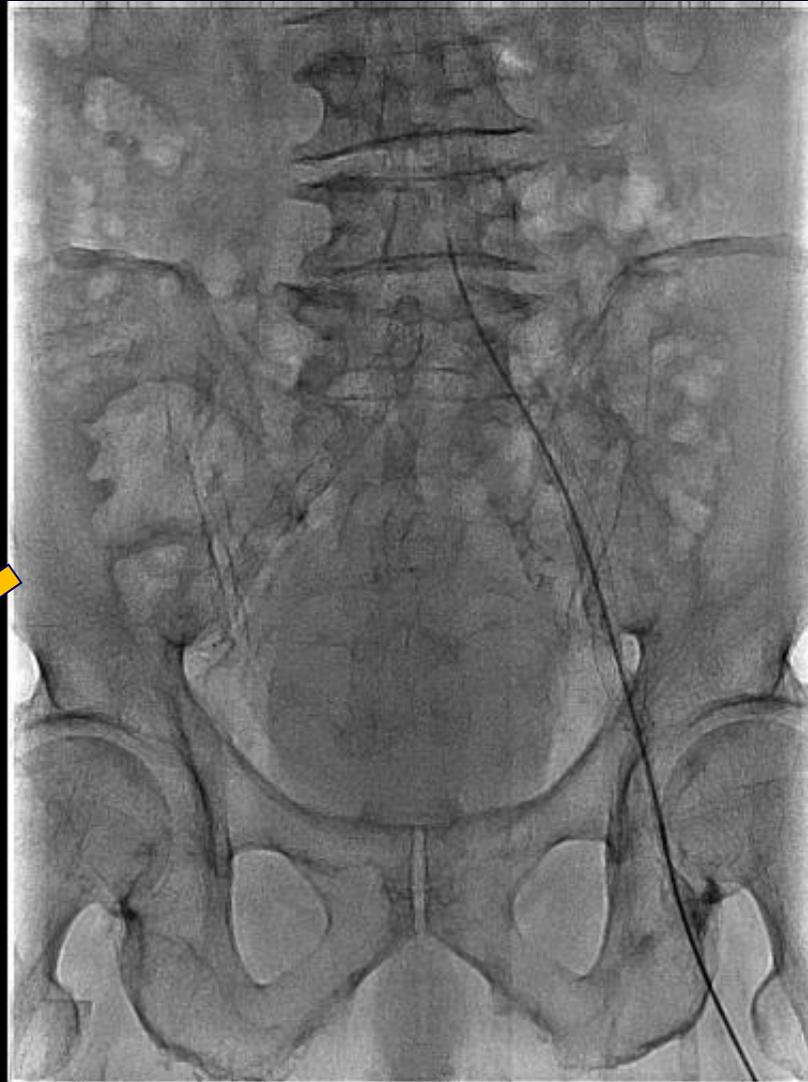


NO sheath

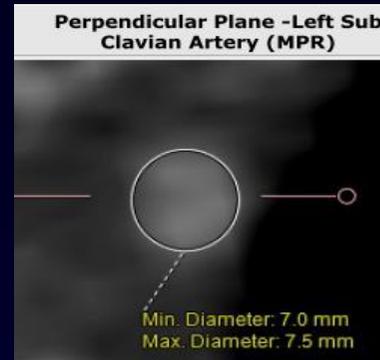
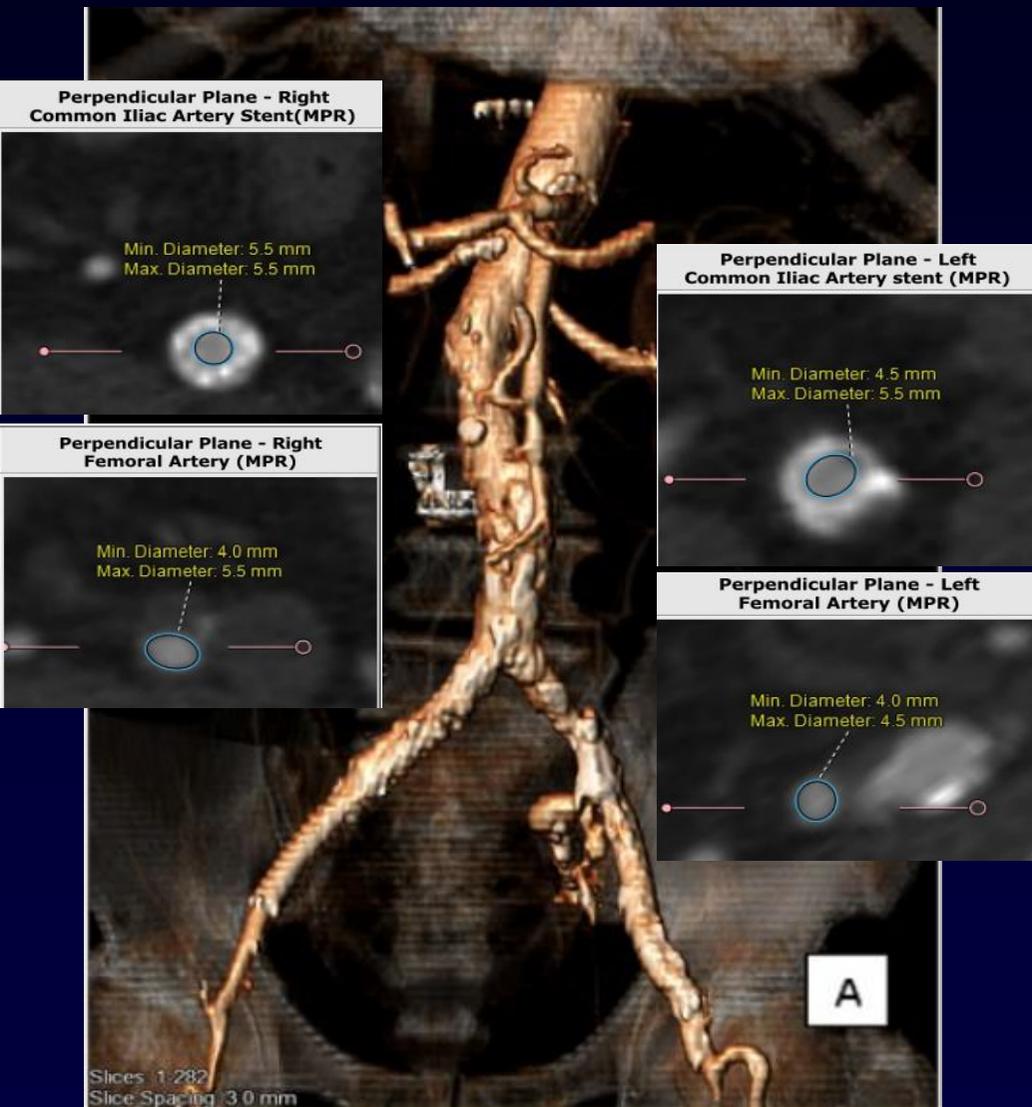
- **82 / M**
- **C.C: Angina, DOE**
- **Comorbidities**
 - Hypertension for 20 years
 - CAD (LM, 3VD)
 - PAD
 - s/p stenting, both iliac arteries
- **Functional class: NYHA III**



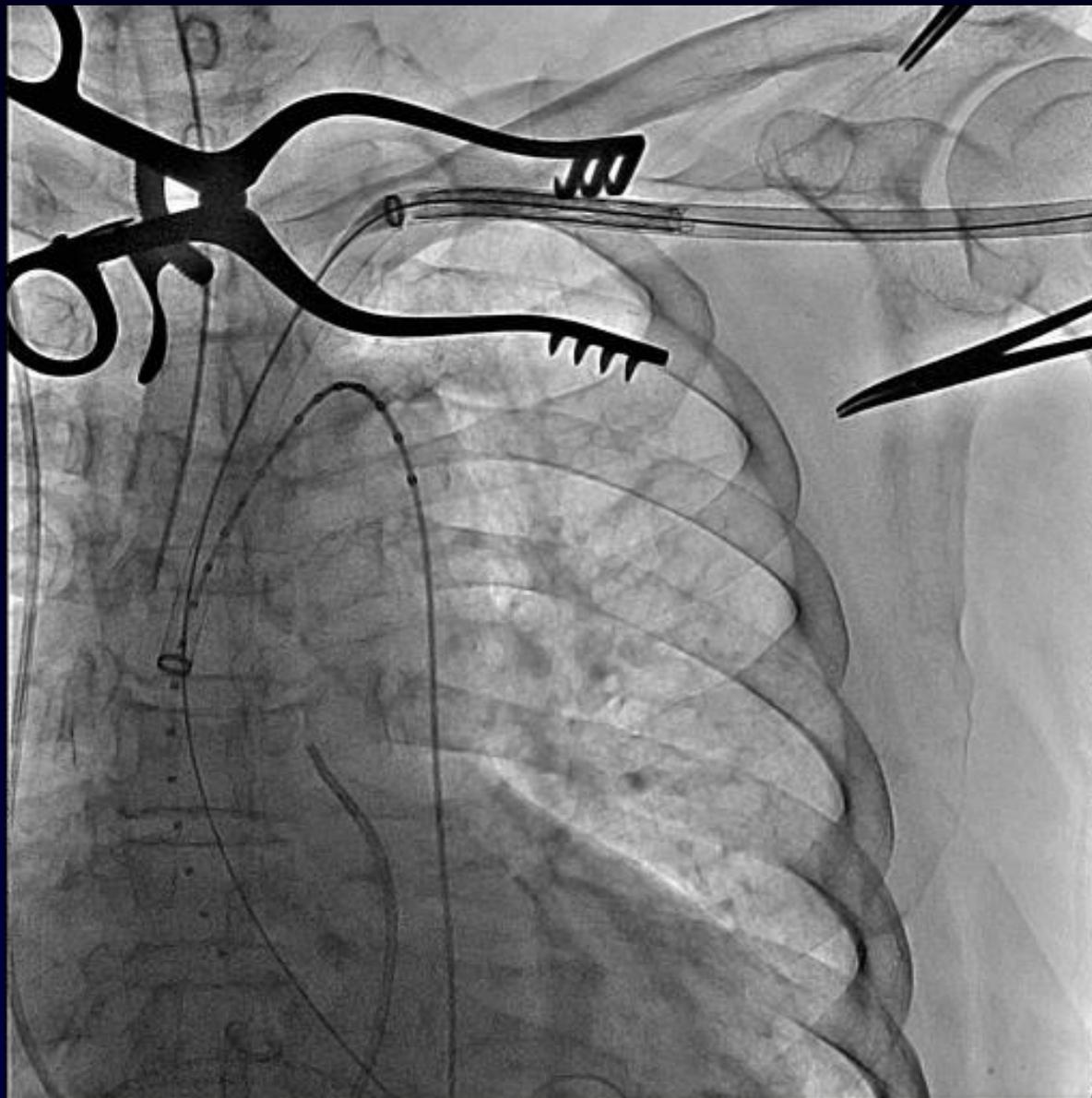
Peripheral angiography



Peripheral angiography



	Right	Left
Iliac	5.5 mm	4.5 mm
Femoral	4 mm	4 mm
Subclavian		7 mm



Subclavian approach

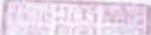
Early learning period experience

- Female / 83
- C.C: Chest pain
- P.Hx: NSTEMI
- Functional class: NYHA III

11255602 소견서

원부대표필인 

병력번호 : 28321573
 연번호 : 471435 주민등록번호 : 280515 - [REDACTED]

환자의 성명	[REDACTED]	성별	여	생년월일	1928년 05월 15일	연령	83세
환자의 주소	[REDACTED]						
병명	대동맥(관) 협착증 기타 부위의 급성 관벽성 심근경색증 상세병명의 심장기능상상(심부전)					한국질병분류번호 I350 I212 I509	
담	신촌 세브란스 흉영기 선생님께 본 환자는 NSTEMI, severe AS로 입원하셨던 분으로 op.에 high risk로 생각되어 TAVI indication을 것으로 판단되어 선생님께 진찰합니다. Echo & angio CD 전 부하여 보내오니 선생님의 고진선처 부탁드립니다. 감사합니다.						
치	요						
의	견						
위와 같은 소견임.							
발행일	2011년 08월 12일 						
의요기관	[REDACTED]						
주소	[REDACTED]						
연혁번호	[REDACTED]						

* 발원직인이 없는 것은 무효임.

Peripheral angiography

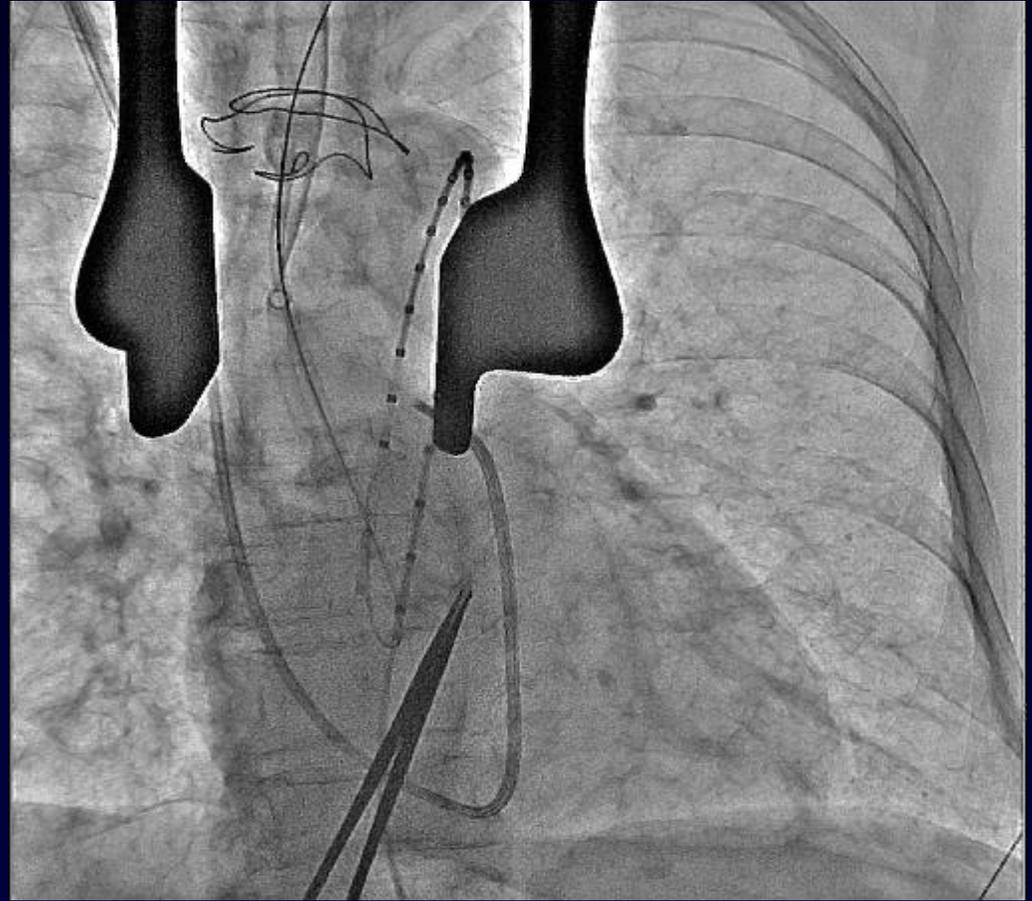
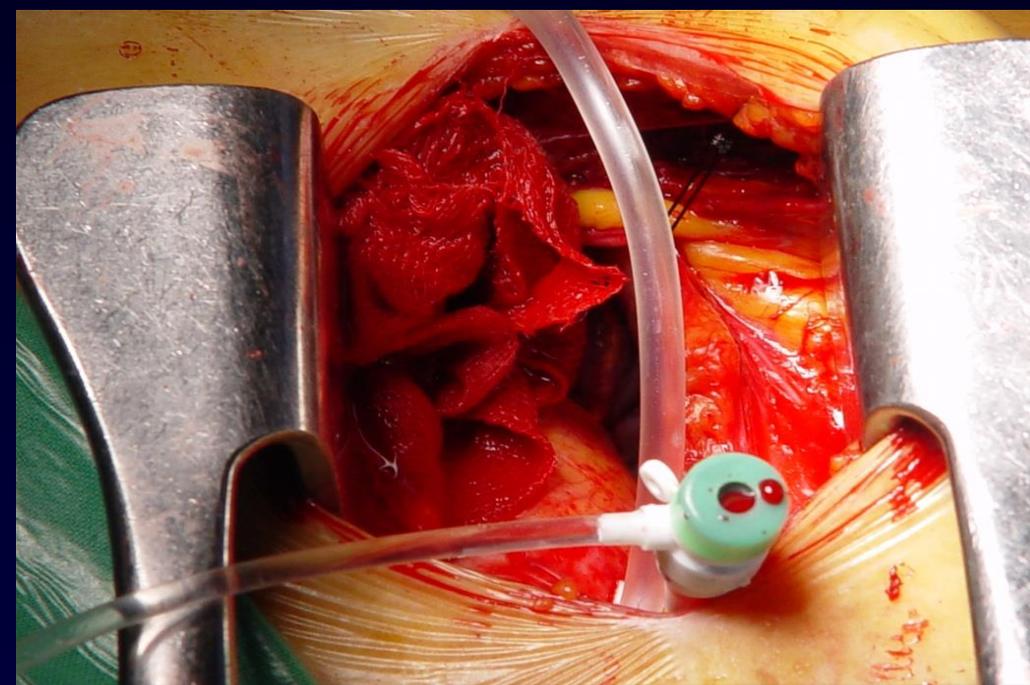
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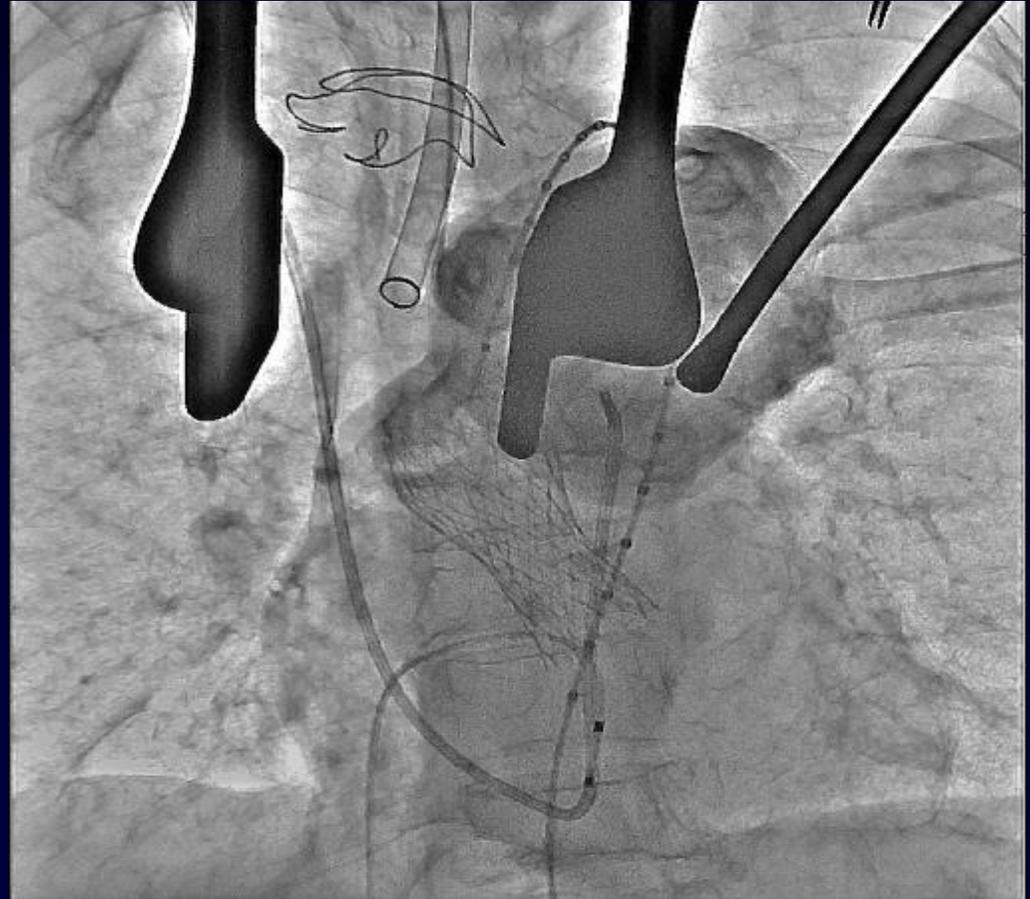
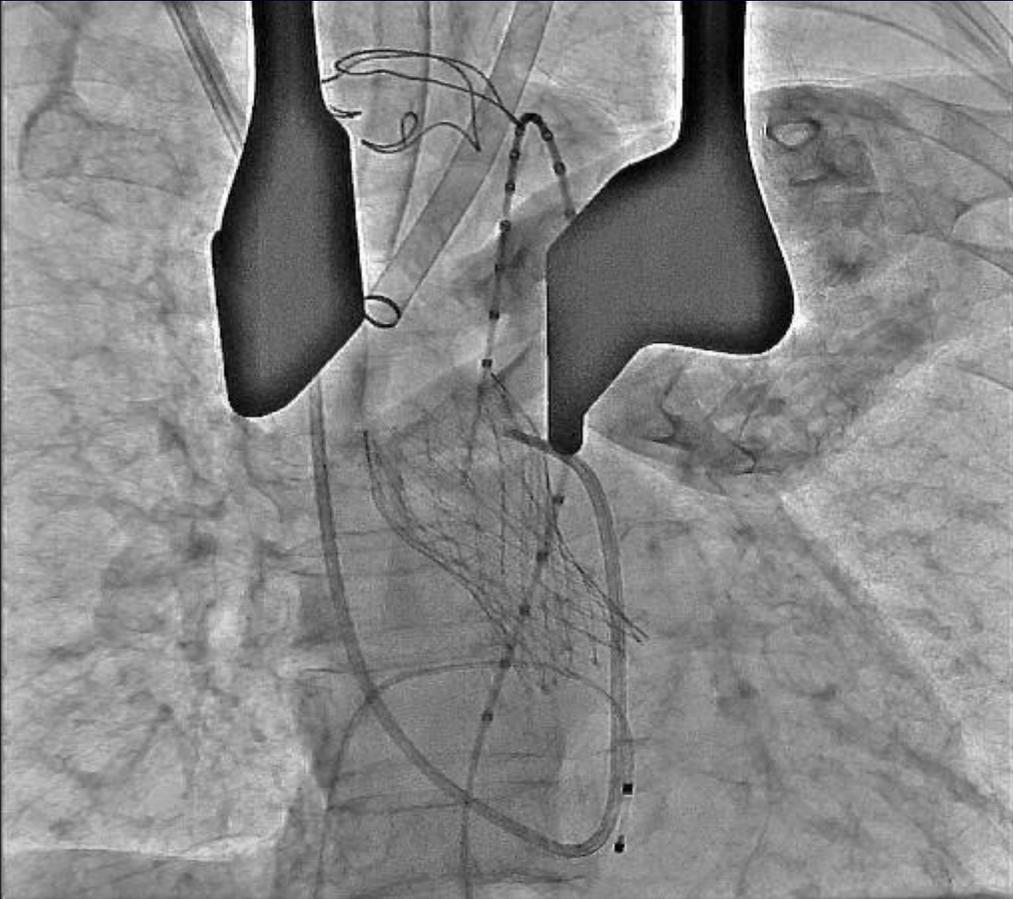
	Right	Left
Iliac	4.5-6 mm	5.5-6mm
Femoral	5 mm	5 mm
Subclavian		5.5 mm



Direct aortic procedure



Direct aortic procedure



SUMMARY

1. Access site evaluation

- Aortogram, p-angiogram, CT angiogram

2. Transfemoral approach

- Pigtail guided puncture or surgical cut down
- Selection of appropriate sheath
- Vessel repair
 - Percutaneous closure with 2 ProGlides
 - Surgical Repair
- Confirmation of access site patency after procedure

3. Subclavian or direct aortic approach can be attempted if transfemoral approach is not possible.