



Aortoiliac Calcifications

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Disclosure

Speaker name:

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I have the following potential conflicts of interest to report:

- Consulting: Medtronic, Boston Scientific, Alucent
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest

Iliac calcifications

- Calcification is very common in the iliac arteries, and is associated with decreased procedural success with standard endovascular techniques
- Risk of perforation, dissection and distal embolization



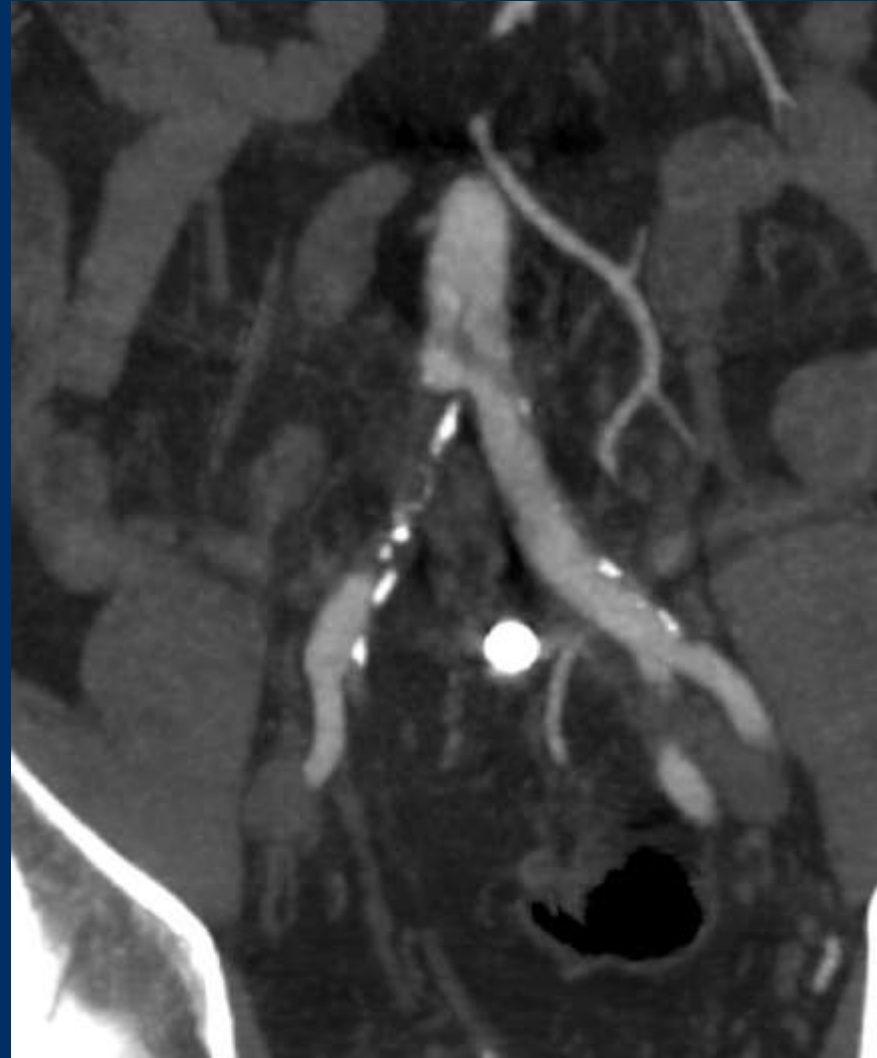
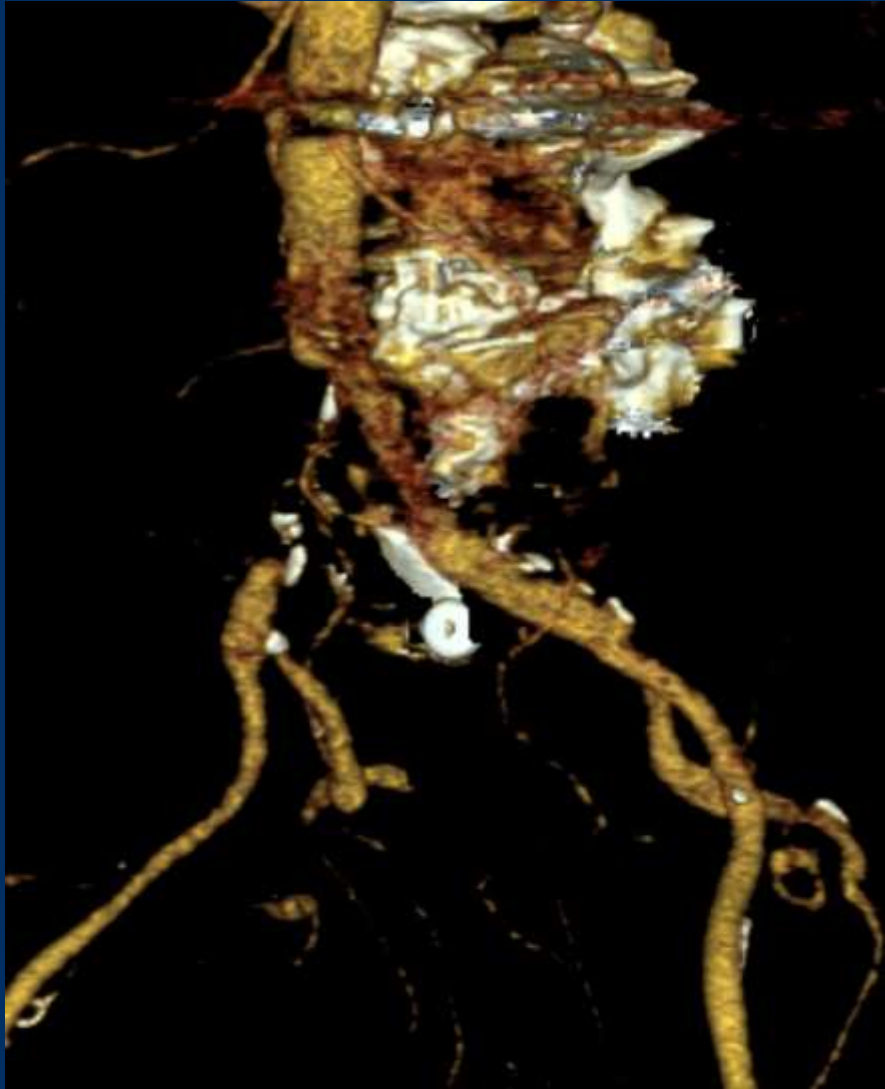
Aorto-iliac bypass



Kissing iliac stents

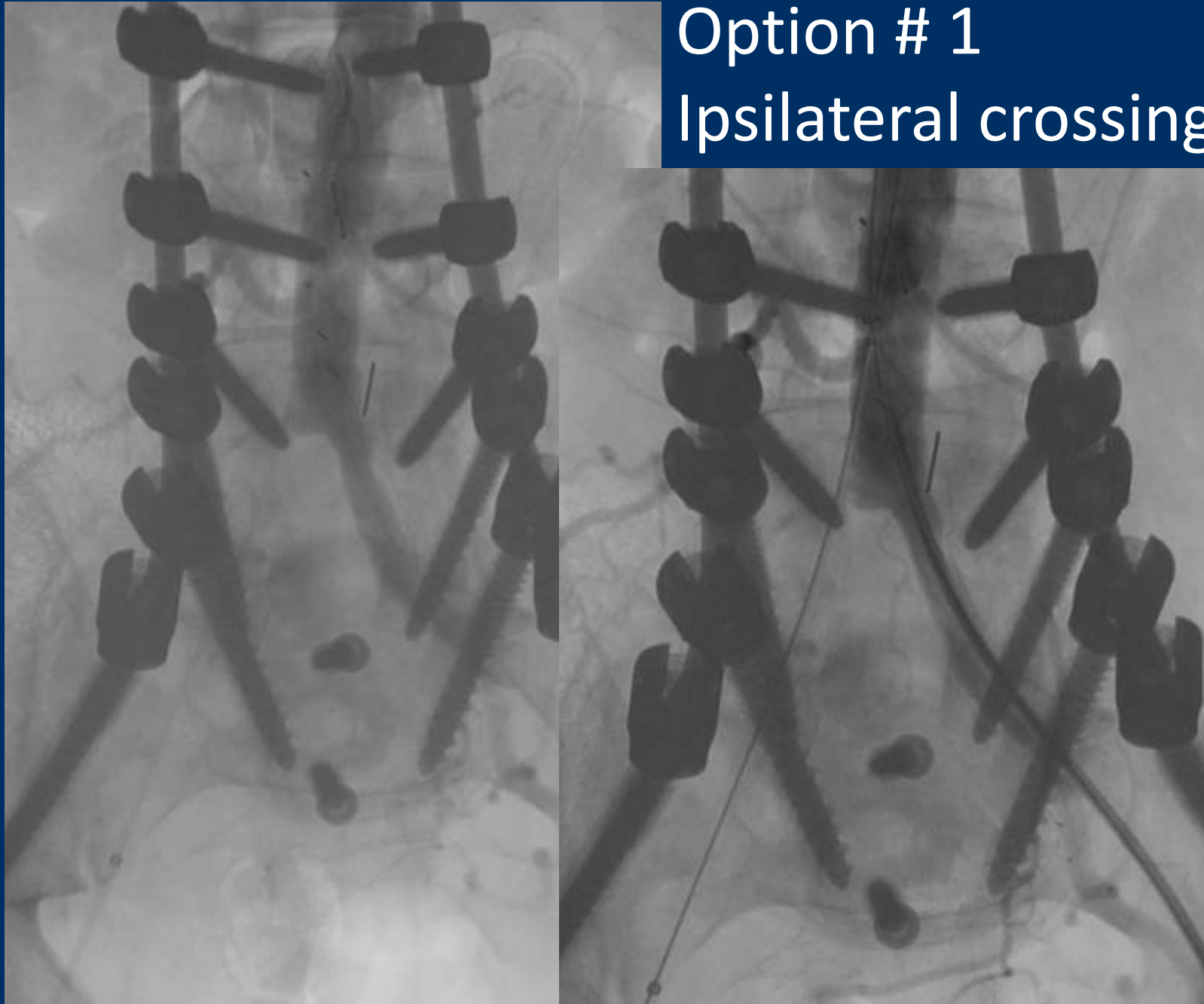


Crossing Techniques



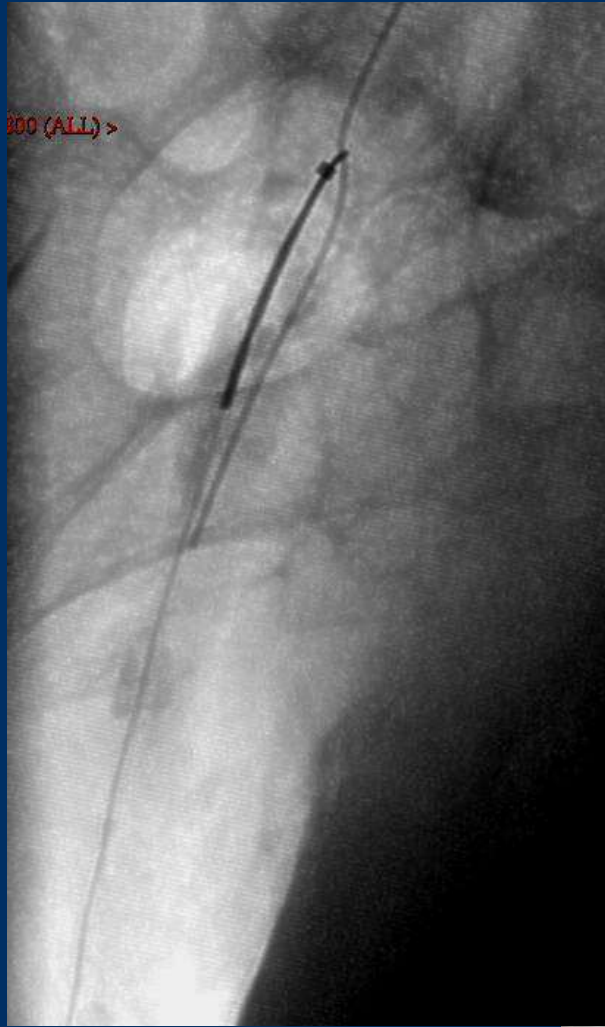
Option # 1

Ipsilateral crossing

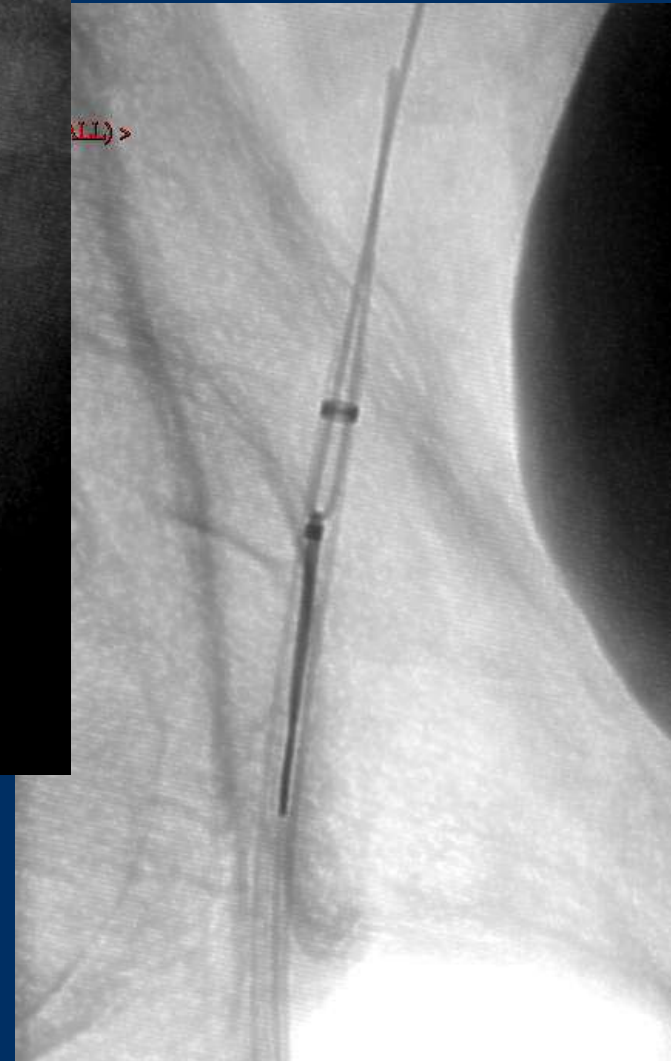


Option # 2 “up and over” crossing Arm access can considered

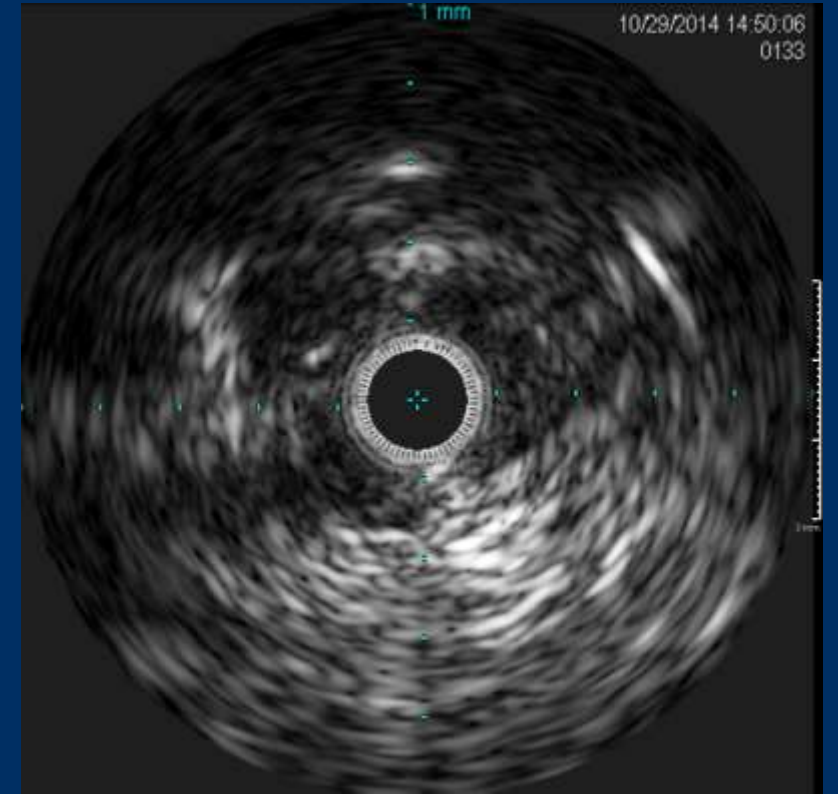
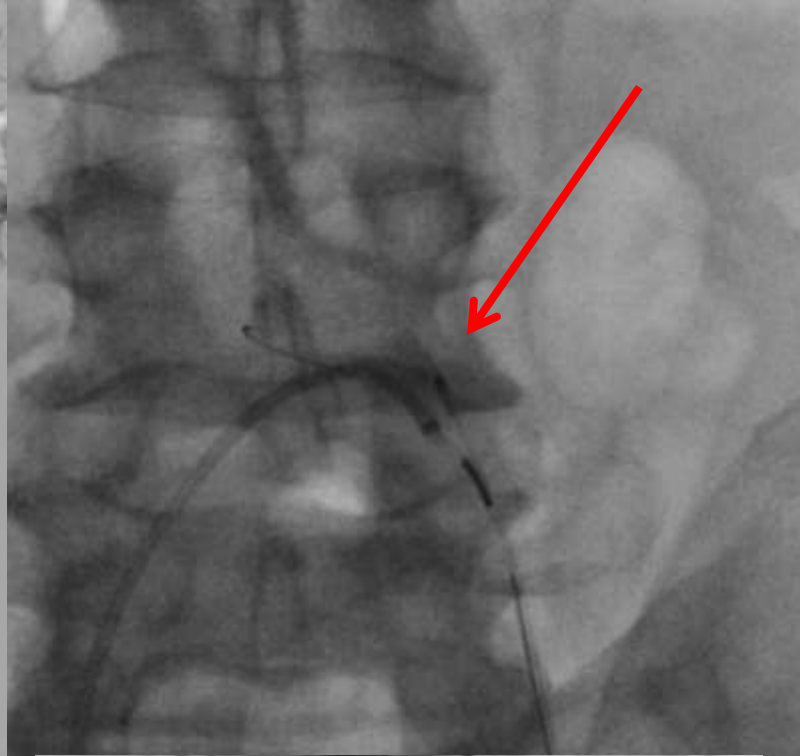
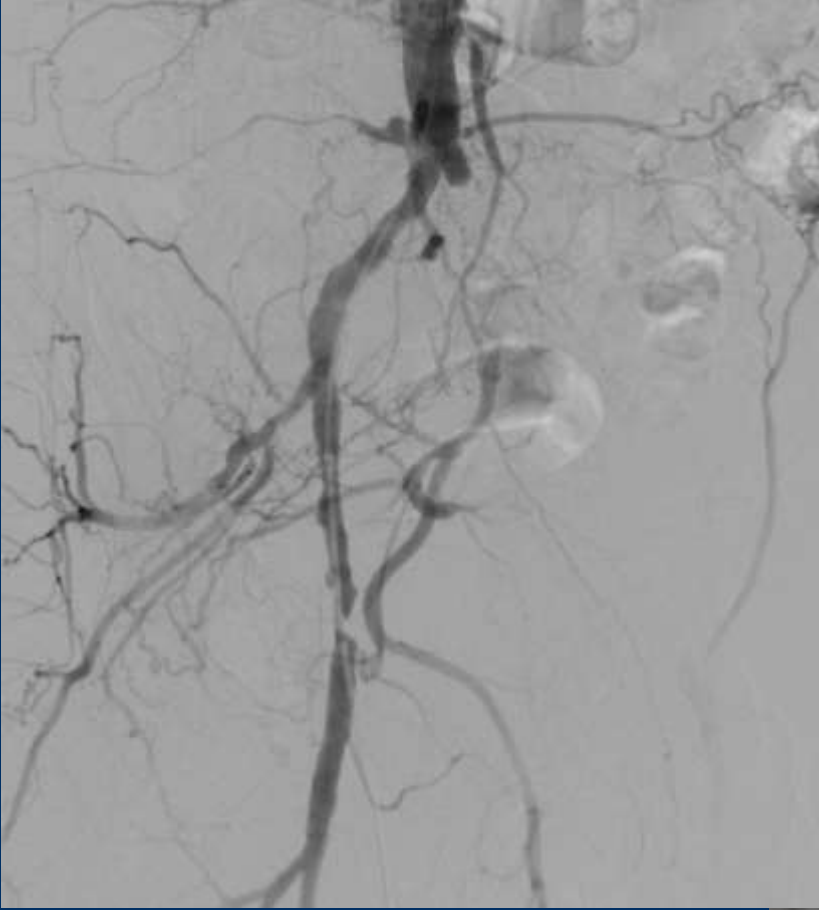




Loop Snare
flossing wire

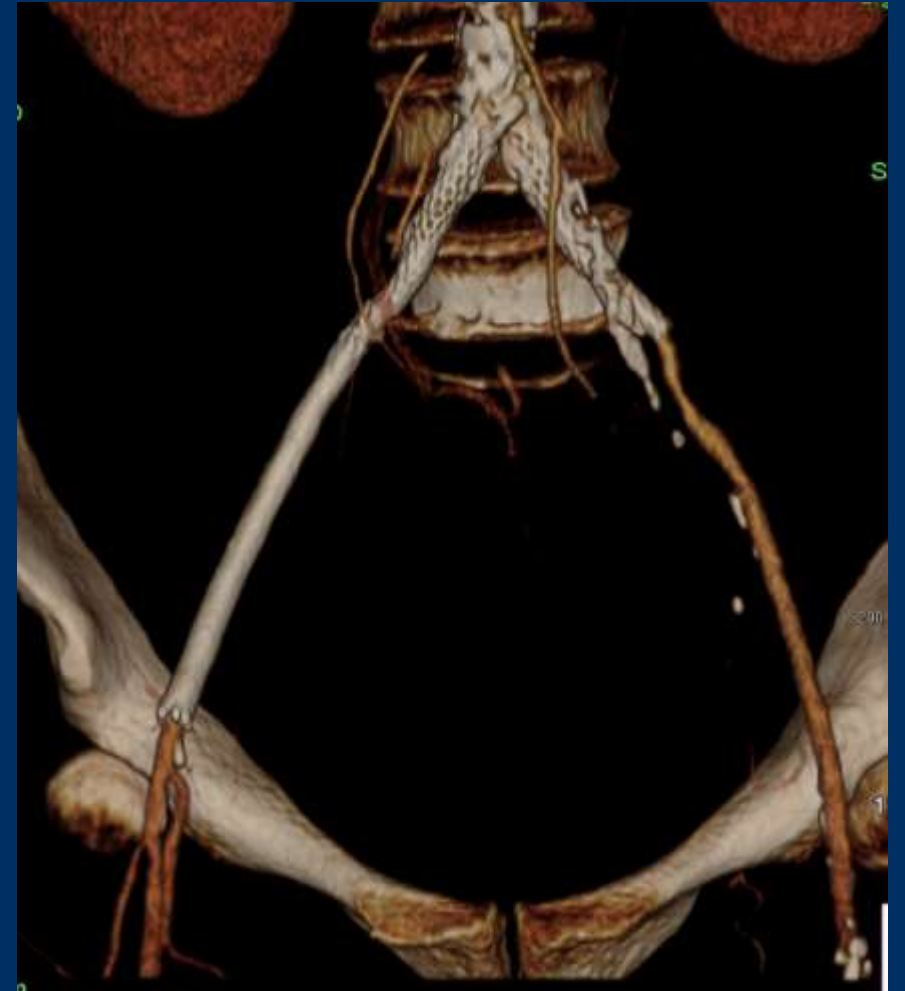


Option #3 Re-entry device



Stent Choice in calcified iliac arteries

- Heavily calcified arteries- safer to use covered stents due to risk of perforation
- Patency is higher for covered stent compared to BMS in TASC C and D

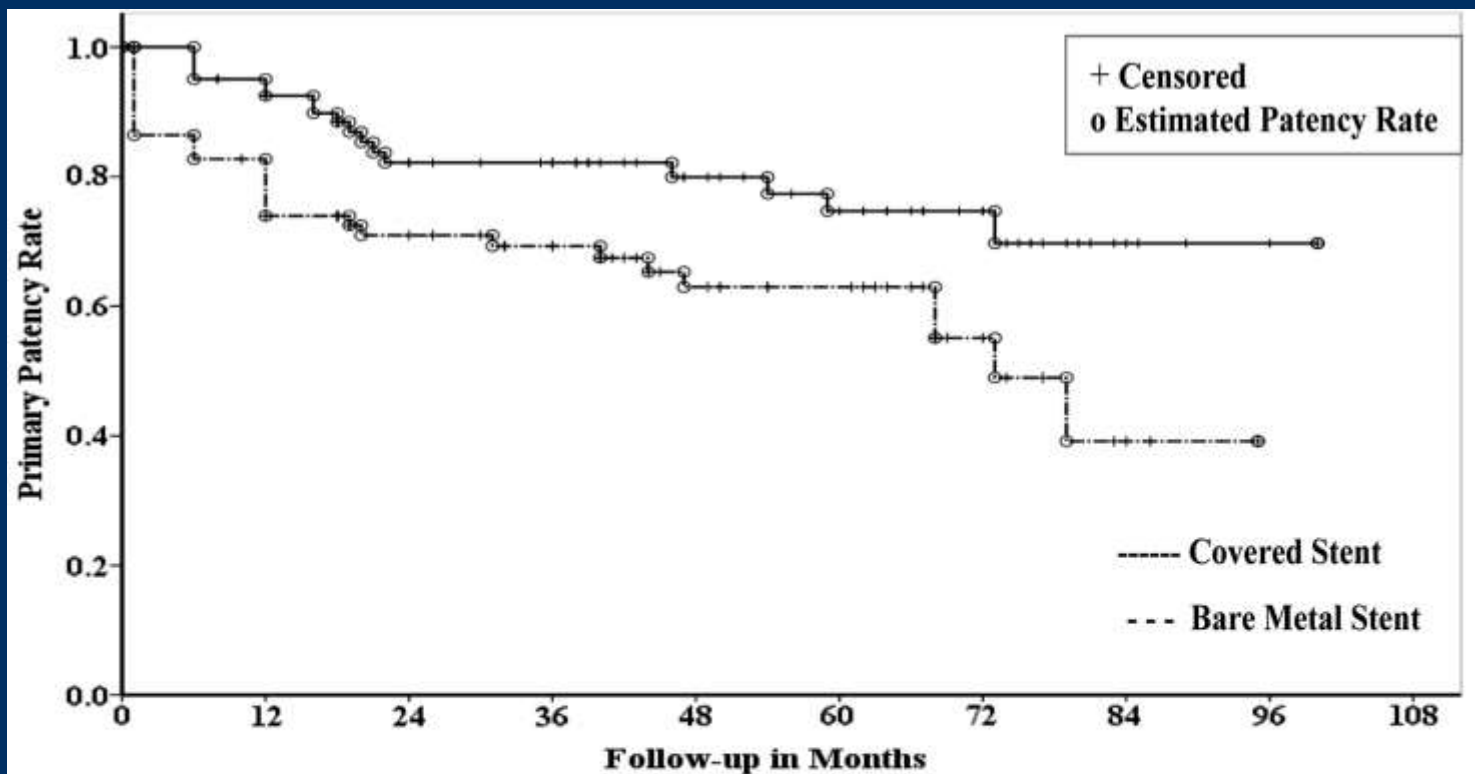


COBEST Revisited: 5 year Review

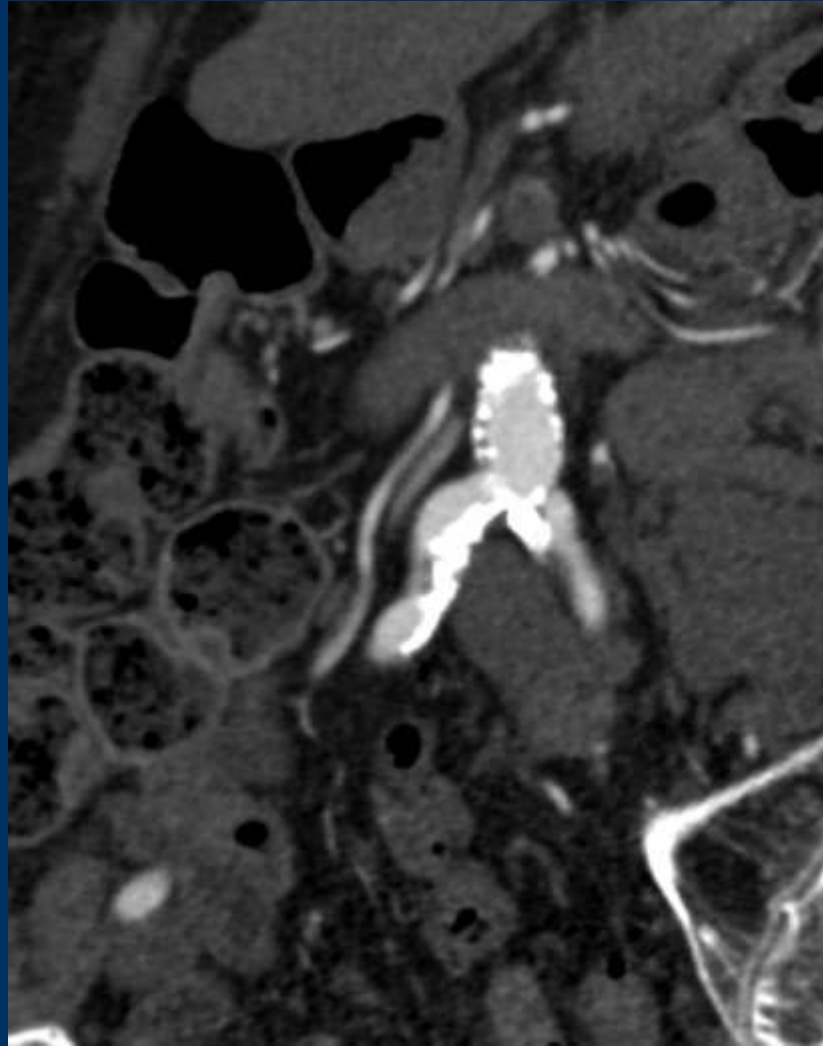
- Original study showed superior patency for BE CS over BMS in TASC C/D at 18 months
- 77 of original 126 patients had 5 year follow-up
- Primary patency (imaging) 75% versus 63% (p=0.01)
- **HR 8.6 for TASC C/D lesion patency**

Mwipatayi BP, et al. Durability of the balloon-expandable covered stent. J Vasc Surg 2016; 64: 83-94.

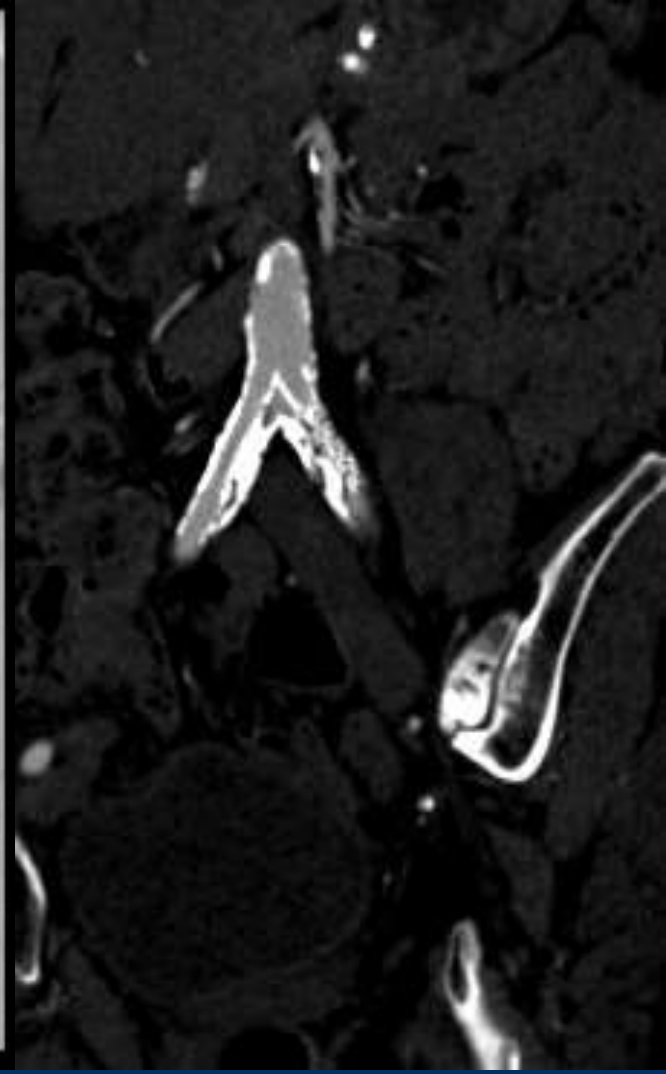
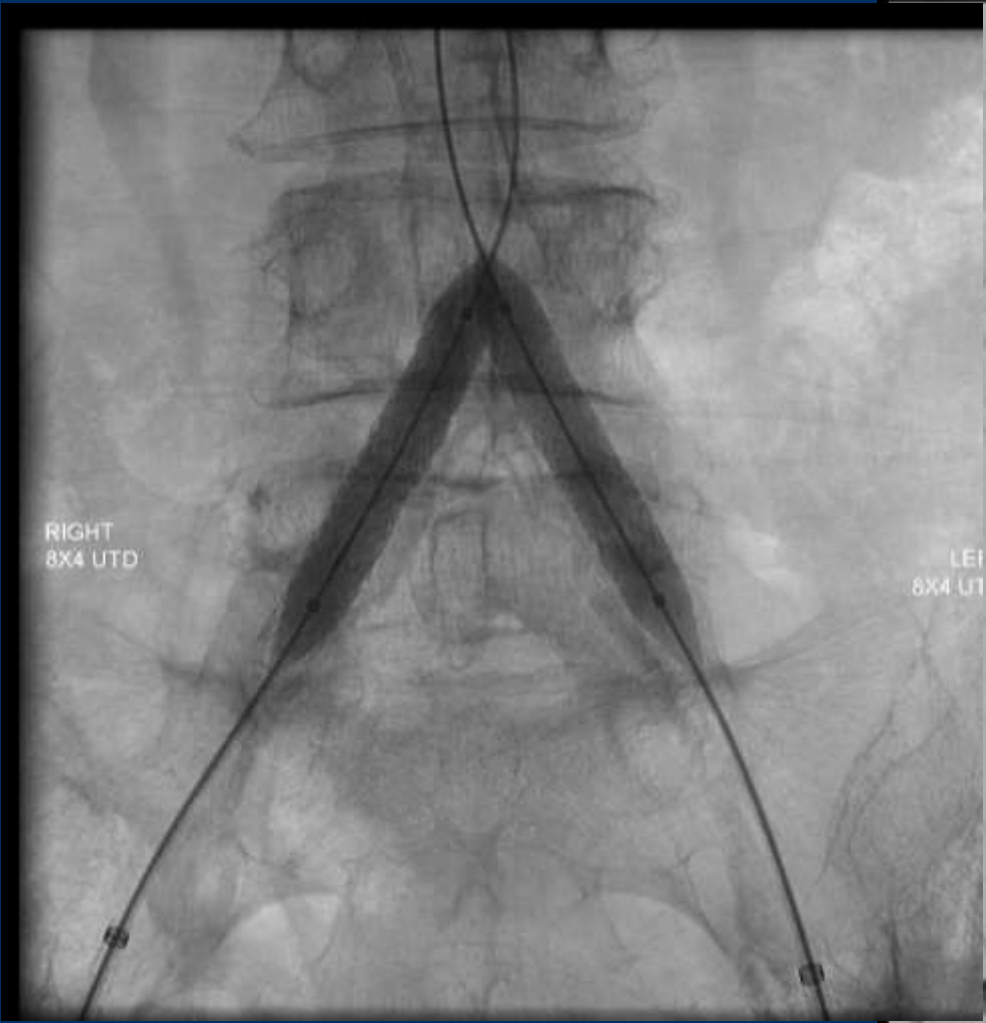
BMS Primary Patency Falls Off at 5 years



Time (Months)	0	12	24	36	48	60	72	84	96
Advanta V12 Stent (n. at risk)	83	74	52	47	35	28	17	5	2
Standard Error (%)	-	2.95	4.54	4.54	4.93	5.84	5.84	7.27	7.27
BMS (n. at risk)	85	66	46	40	28	23	10	3	1
Standard Error (%)	-	4.89	5.13	5.27	5.94	5.94	7.36	11.2	11.2

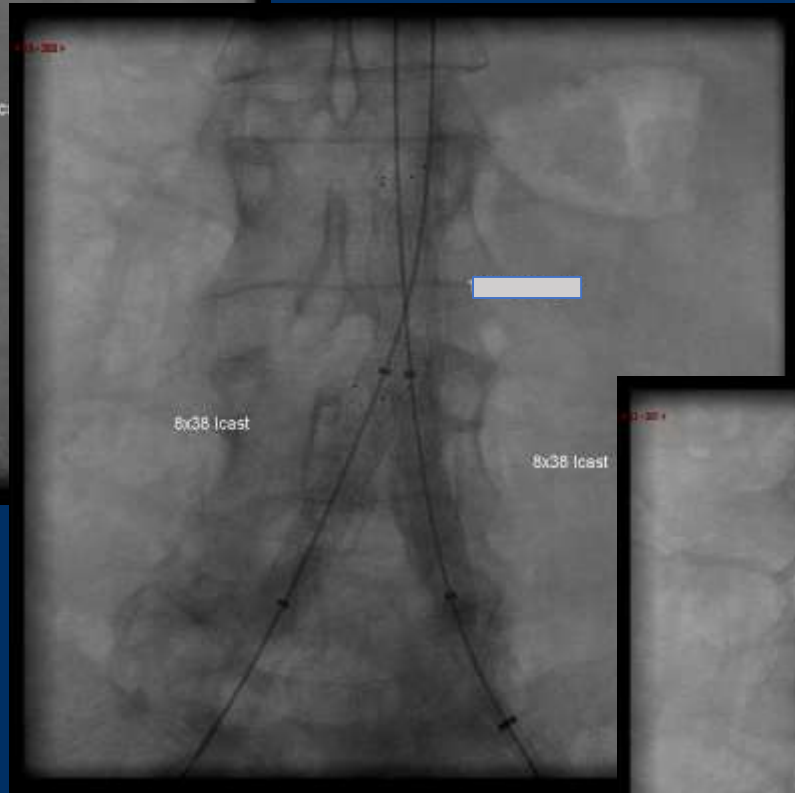
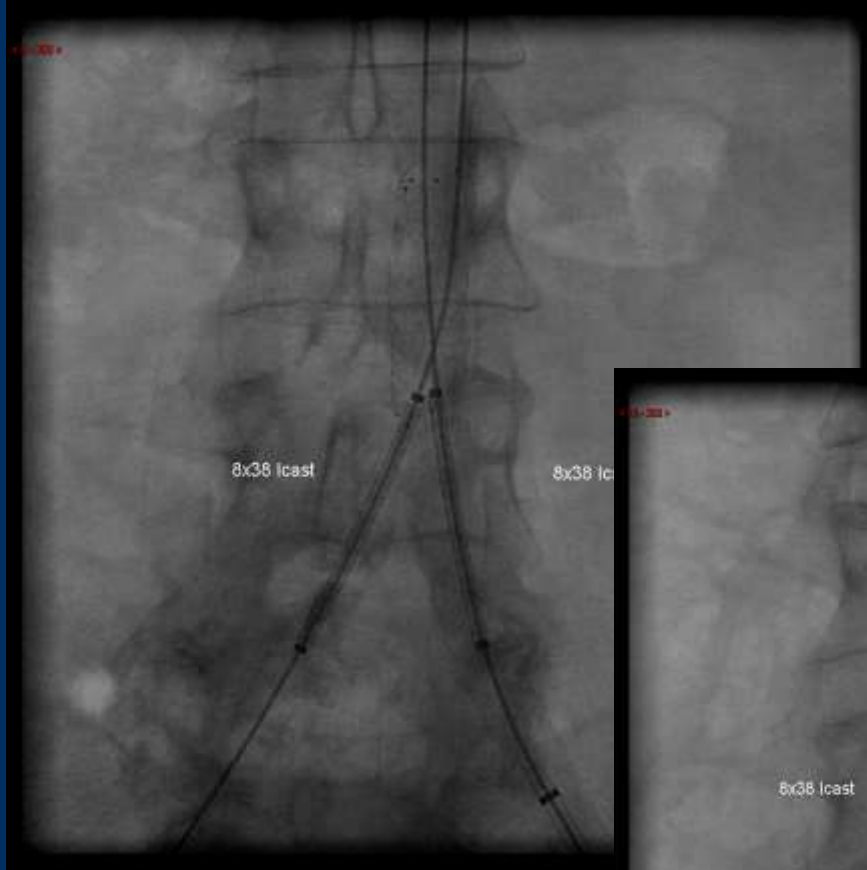


Kissing covered iliac sent with 3 year follow up

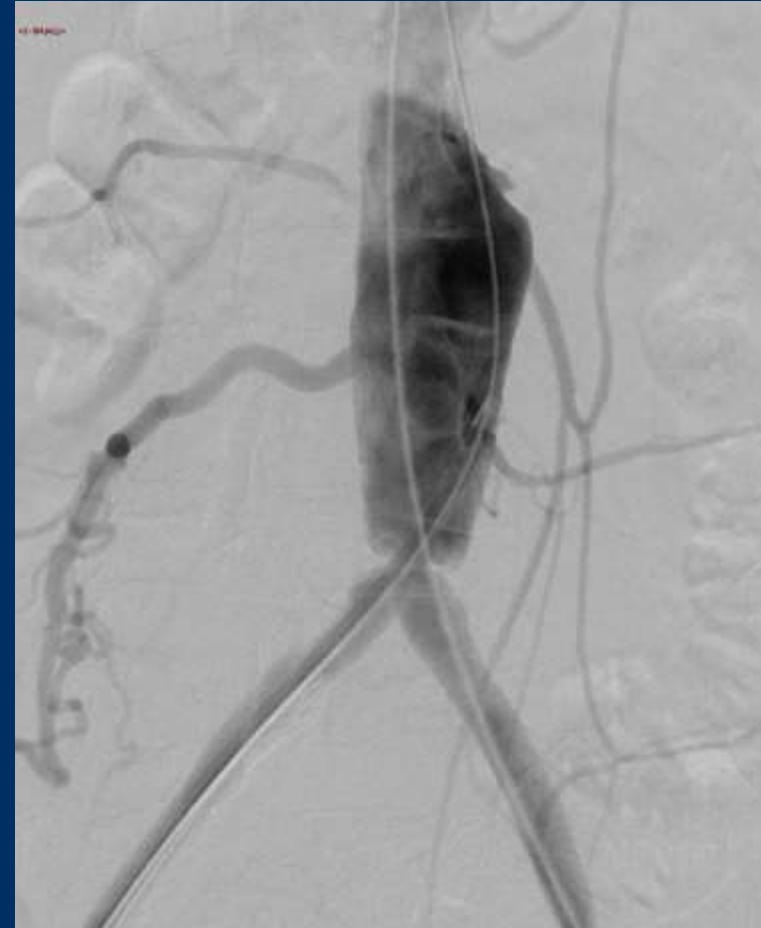
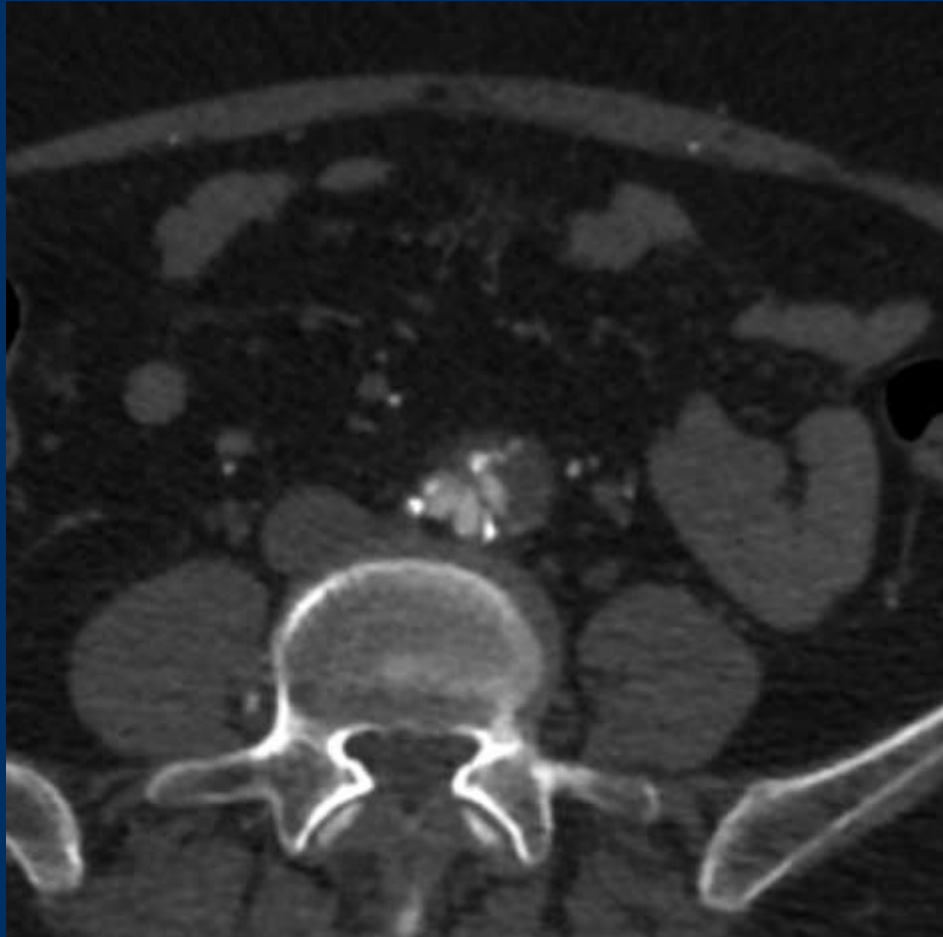


Aortic bifurcation disease

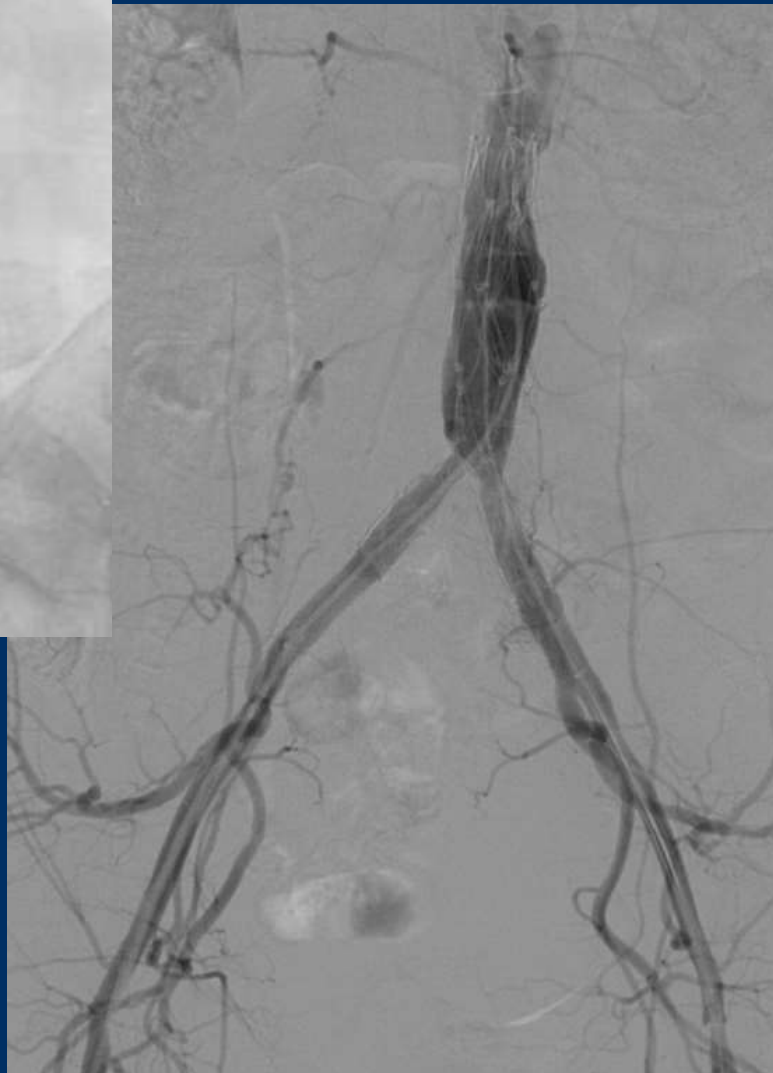
- When faced with disease extending > 1 cm above the bifurcation, consider aortic stent first
- Covered Endovascular Reconstruction of Aortic Bifurcation (CERAB)
- Aortic stent graft for bifurcation



Bilateral buttock claudication
ABIs 0.6 bilaterally



Aortoiliac stentgraft
Claudication resolved
ABIs 0.9-1.0 bilaterally



What about atherectomy for calcified iliacs

- Atherectomy of the iliac artery is uncommon due to the risk of life-threatening perforation
- A few case series reviewed safety of atherectomy

Acute procedural outcomes of orbital atherectomy for the treatment of iliac artery disease: Sub-analysis of the CONFIRM registries.

Lee MS et al. Cardiovasc Revasc Med. 2018 Jul

- At least one iliac artery lesion treated with orbital atherectomy (n=62 patients; n=68 lesions) were compared to patients with SFA lesion treated with orbital atherectomy (n=1570 patients; n=1809 lesions).
- The orbital atherectomy run time was significantly shorter in the iliac artery group.
- **In the iliac group there was one reported perforation and one reported vessel closure.** No spasm, dissection or embolization
- The overall procedural complication rate was significantly lower in the iliac group compared to SFA (2.9% vs. 11.2%, p=0.03).

A prospective registry of intravascular lithotripsy enabled vascular access for transfemoral transcatheter aortic valve (TAVR) replacement

C. Di Mario et al. J Am Coll Cardiol Intv (2019)

- 42 patients. 100% achieved successful sheath passage and TAVR intervention
- Average maximum calcium arc was 265.5°.
- Reference vessel diameter was 8.1 mm. The majority of IVL was performed with a 7-mm catheter
- No iliofemoral perforation or dissection requiring stent implantation.
- Access site complications were low (4.6%) with 1 patient developing PSA and 1 requiring endarterectomy

Intravascular Lithotripsy for Treatment of Calcified, Stenotic Iliac Arteries: A Cohort Analysis From the Disrupt PAD III Study

Ehrin Armstrong et al Cardiovasc Revasc Med. 2020 Oct

- 118 patients with a total of 200 lesions were enrolled across 20 sites. **101 patients were treated primarily for claudication or critical limb ischemia**, while 17 patients were treated to optimize the iliac vasculature for large-bore access.
- 100% successful IVL catheter delivery.
- Average reference vessel diameter was 7.3 mm
- **Severe calcification was present in 82.0% of overall cases.**
- Stent placement was performed in 72.9% of the overall cases
- **Angiographic complications were minimal with no flow-limiting dissections and a final mean residual stenosis of 12.0%**

