BUILDING ENDOVASCULAR SYNERGIES

MEET 2015
MULTIDISCIPLINARY EUROPEAN ENDOVASCULAR THERAPY

Iliac branched devices *versus* Iliac branched endoprothesis Differences in selection and usage

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Disclosure

Speaker name:

.....Fabio Verzini.....

☐ I have the following potential conflicts of interest to report:

☒ Consulting for Cook , Gore, Medtronic

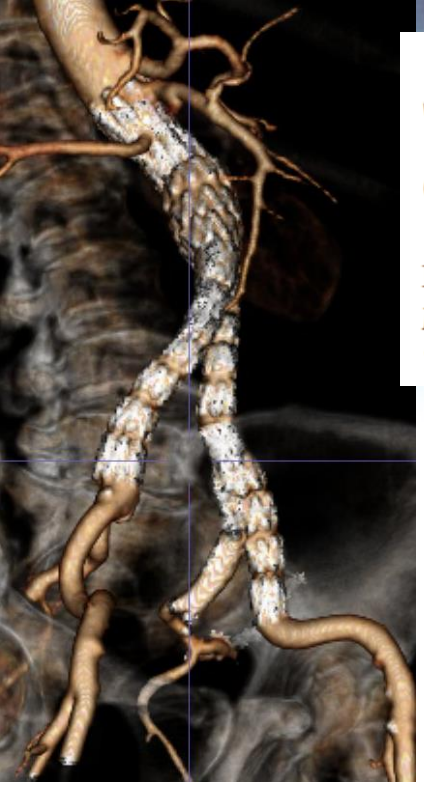
Pelvic ischemia and quality of life scores after interventional occlusion of the hypogastric artery in patients undergoing endovascular aortic aneurysm repair

Elixène Jean-Baptiste, MD, PhD, Sophie Brizzi, MD, Michel A. Bartoli, MD, PhD, Nirvana Sadaghianloo, MD, Jean Baqué, MD, Pierre-Edouard Magnan, MD, Réda Hassen-Khodja, MD

Journal of Vascular Surgery, 2014; 60: 40-49

HA occlusion in 71 pts	
Fatal pelvic ischemic complications	2.8%
Buttock claudication	25.3%
Persistent claudication (@18 months)	85%

Risk factor for buttock claudication	**OR**
Young age	.92
Distal embolization	3.5



Surgical versus endovascular repair by iliac branch device of aneurysms involving the iliac bifurcation

Konstantinos P. Donas, MD, PhD,[a] Giovanni Torsello, MD, PhD,[a] Georgios A. Pitoulias, MD, PhD,[b] Martin Austermann, MD, PhD,[a] and Dimitrios K. Papadimitriou, MD, PhD,[b] *Münster, Germany; and Thessaloniki, Greece*

(J Vasc Surg 2011;53:1223-9.)

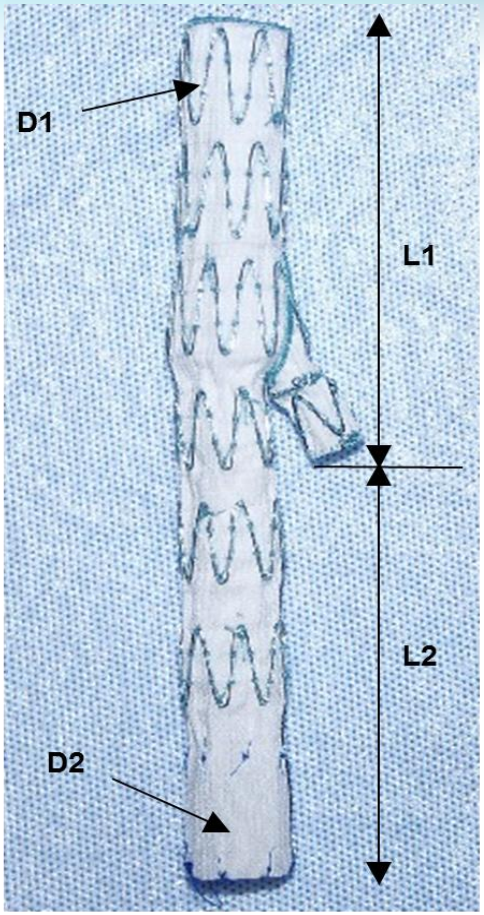
"Endovascular repair by iliac branch device of aneurysms involving the iliac bifurcation can be accomplished with very low morbidity and mortality rates"

	Open (n = 54)	*Endovascular (n = 64)*	P
30-day severe morbidity (n; %)	5; 9.3%	3; 4.6%	**<.001**
30-day mortality (n; %)	3; 5.5%	0; 0%	**<.001**
30-day vascular complications (n; %)	1; 2%	2; 3.1%	.698
30-day non-vascular complications (n; %)	9; 16.7%	3; 6.3%	**.025**
Intensive care unit stay (mean ± SD in days)	2.5 ± 1.2	1.2 ± 0.4	NP
Postoperative stay (mean ± SD in days)	9.7 ± 4.1	4.1 ± 1.5	**<.001**
Operative blood loss (mean ± SD in mL)	669 ± 460	89 ± 30	**<.001**
Transfusion (mean ± SD in units of packed red cells)[a]	1.6 ± 2.0	—[a]	NP[b]
Operative duration (mean ± SD in min)	197 ± 23	89 ± 24	.234
Related death during follow-up[c]	1; 2%[d]	–	NP[b]
Primary endoleak (n; %)	—	8; 12.5%	NP[b]
Primary patency (n; %)	51; 100%[d]	63; 98.4%	.358
Buttock claudication (n; %)	3; 5.9%[d]	2; 3.1%	.473
Colonic ischemia (n; %)	1; 2%[d]	0; 0%	.263
Postoperative hernia	16; 31.4%[d]	—	NP[b]

Device Overview

Available sizes:

- Common iliac segment:
  - L1 = 45 or 61 mm
  - D1 = 12 mm
- External iliac segment:
  - L2 = 41 or 58 mm
  - D2 = 10 or 12 mm
- Sidebranch segment:
  - Length = 14 mm
  - Diameter = 8 mm



Endovascular treatment of iliac aneurysm: Concurrent comparison of side branch endograft versus hypogastric exclusion

Fabio Verzini, MD, Gianbattista Parlani, MD, Lydia Romano, MD, Paola De Rango, MD, Giuseppe Panuccio, MD, and Piergiorgio Cao, MD, FRCS, *Perugia, Italy*

(J Vasc Surg 2009;49:1154-61.)

Table III. Perioperative results (30 days)

	Group I = 32		*Group II = 42*		
	N	*%*	*N*	*%*	P
Mortality/rupture	0		0		
Procedure time (min)	153		160		.02
Fluoro time (min)	45 ± 23		31 ± 14		.02
Contrast (cc)	182 ± 35		180 ± 42		.8
Technical failure	2	6	3	7	1
External iliac limb occlusion	2	6	2	5	1
Iliac endoleak	1	3	8	19	.07
Reintervention	5	16	2	5	.2
Local complications	2	6	3	7	1
Pseudoaneurysm	1	2	–	–	–
Wound dehiscence	–	–	1	2	–
Wound hemorrhage	1	3	–	–	–
Lymphorrea	–	–	2	5	–

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Table IV. One-year results

	Group I = 23		*Group II = 37*		
Patients	*N*	*%*	*N*	*%*	P
Unrelated mortality	1	4	3	7	1
Reinterventions	0	–	2	5	.1
Iliac endoleak	1	4	7	19	.1
Pelvic ischemia*	1	4	8	22	.1
Iliac diameter decrease	7	30	13	35	.8
Iliac limb occlusion	0	–	1	3	1

Long-term Results of Iliac Aneurysm Repair with Iliac Branched Endograft: A 5-Year Experience on 100 Consecutive Cases☆

G. Parlani[a], F. Verzini[a], P. De Rango[a,*], D. Brambilla[a], C. Coscarella[b], C. Ferrer[b], P. Cao[b]

European Journal of Vascular and Endovascular Surgery 43 (2012) 287–292

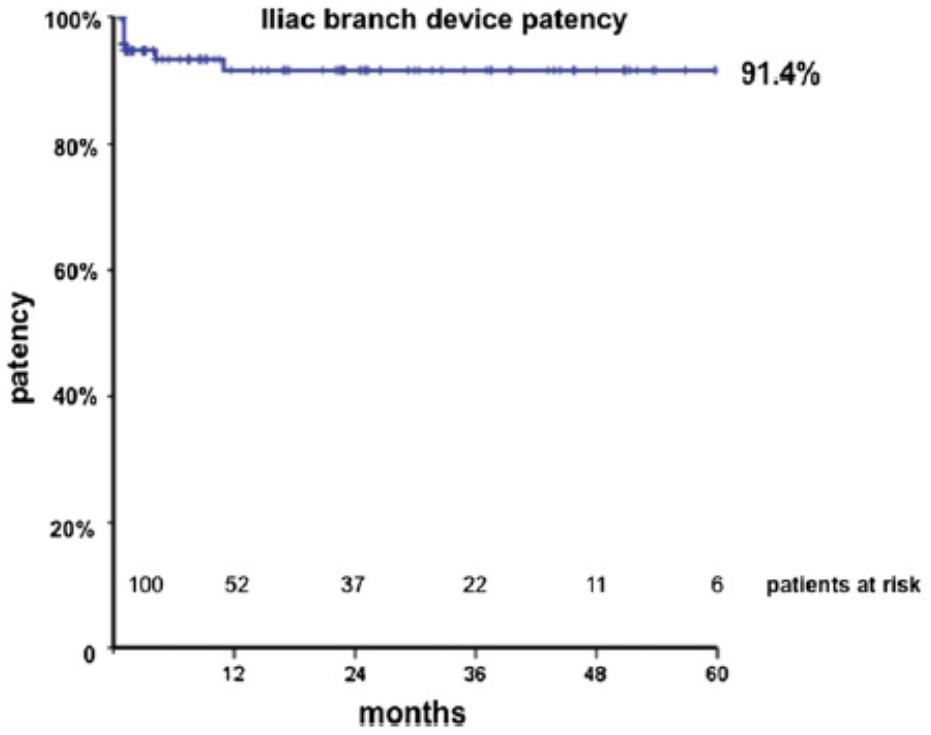

Figure 3. Kaplan–Meier estimates of internal iliac side-branch patency rate.

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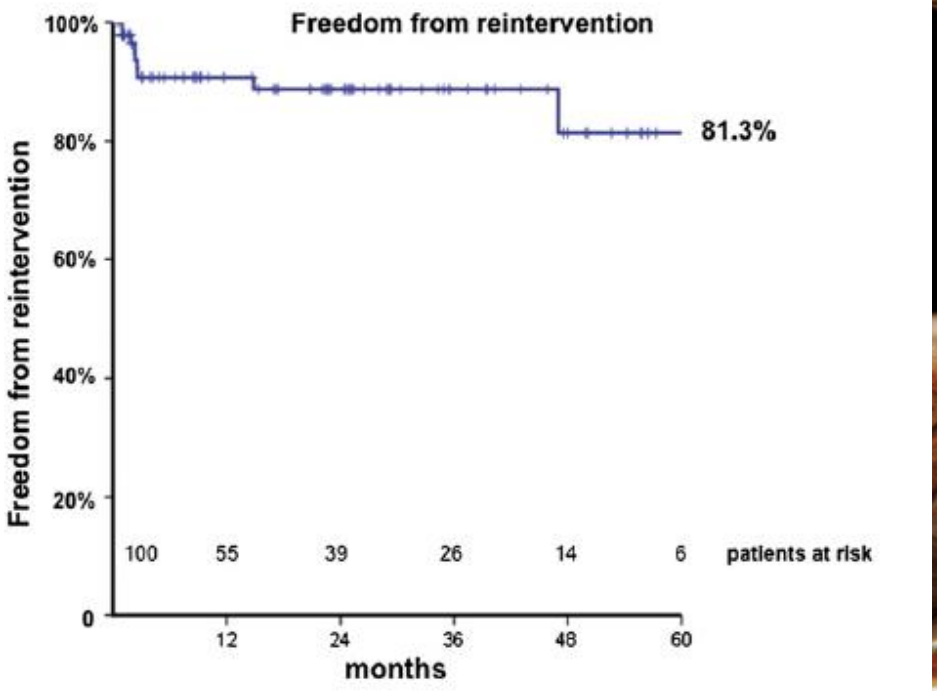
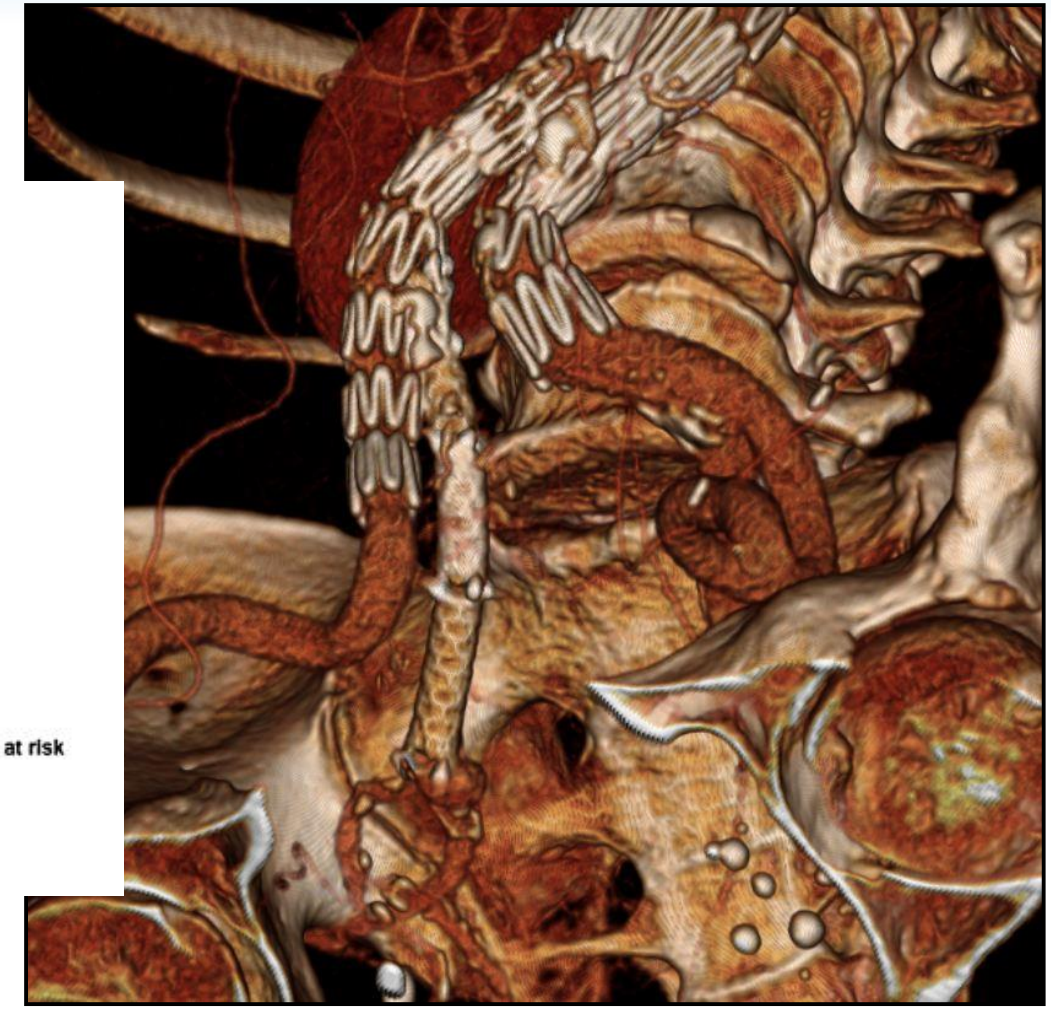
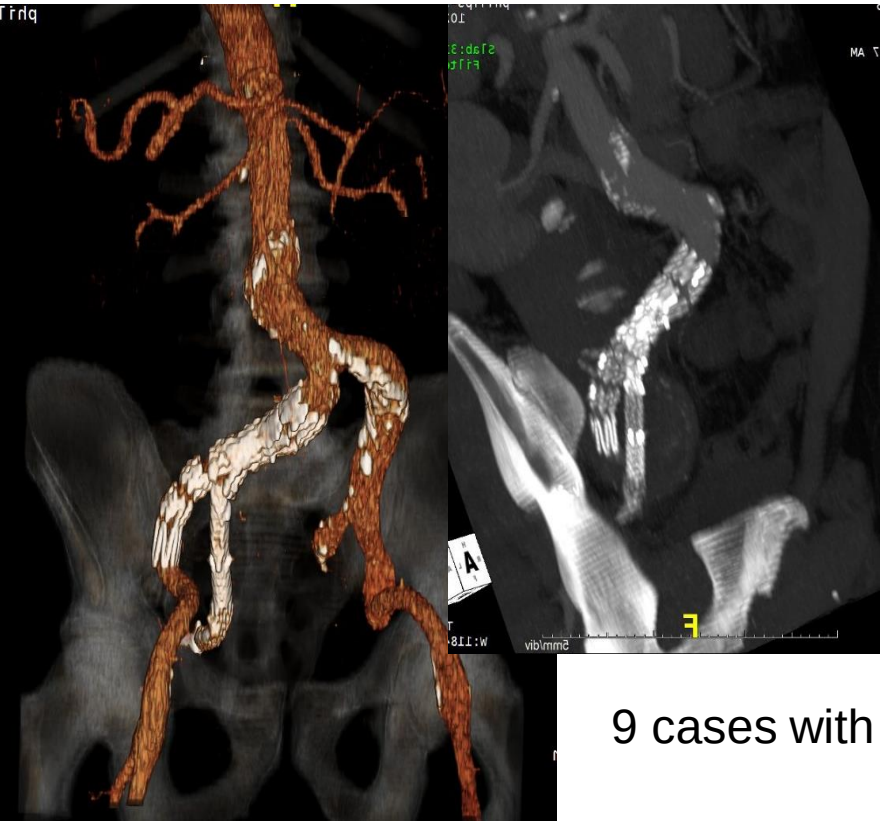




Perugia-Rome experience 2006-2013
123 IBDs

SeSG (Fluency) in 76 pts

- tortuosity
- hypogastric aneurysm

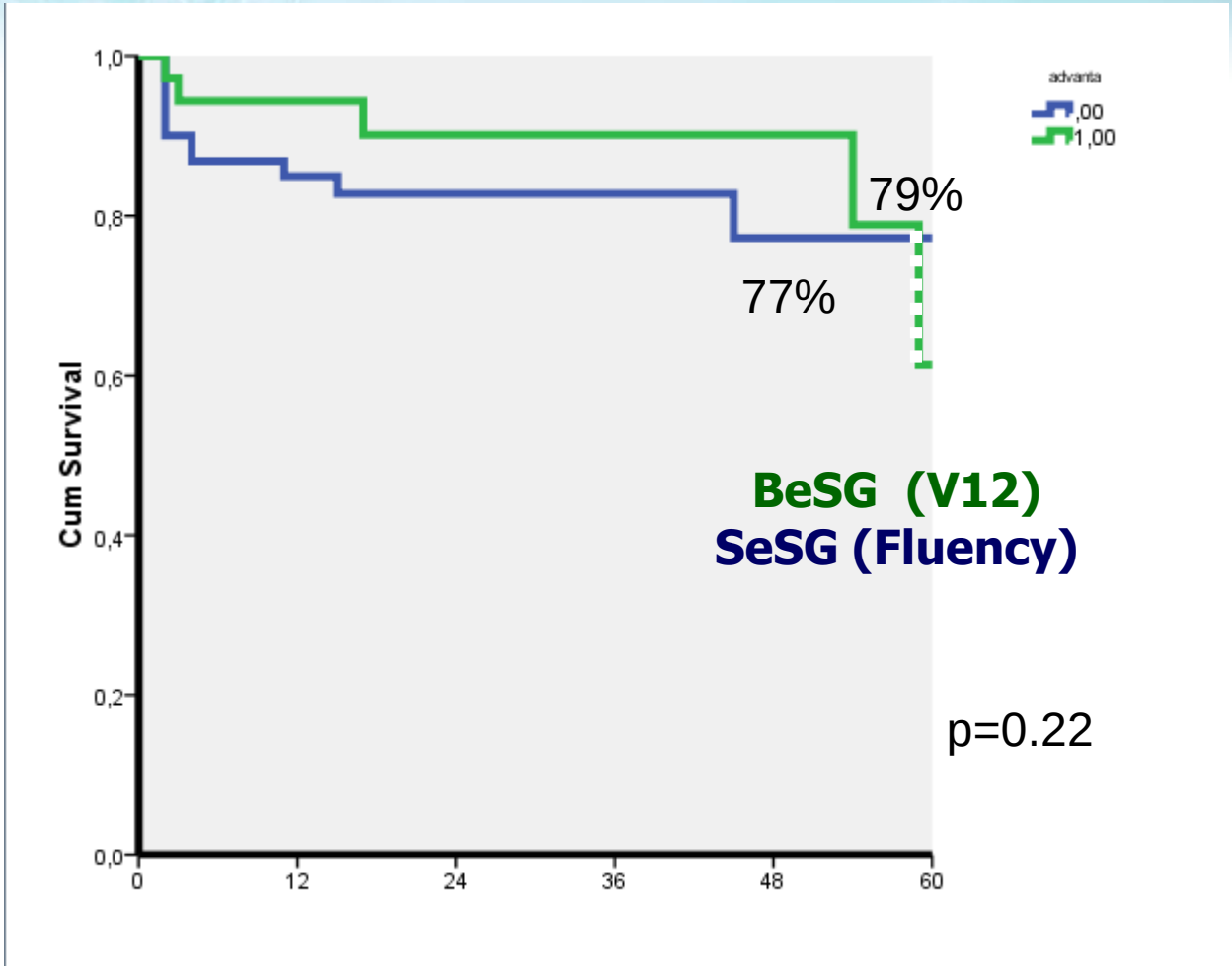


BeSG (V12) in 38 pts

- calcification
- small distal common iliac diameter
- stenosis

9 cases with both BS, excluded

CLINICAL FAILURE (hypogastric occlusion, HA reintervention, iliac growth> 3 mm)



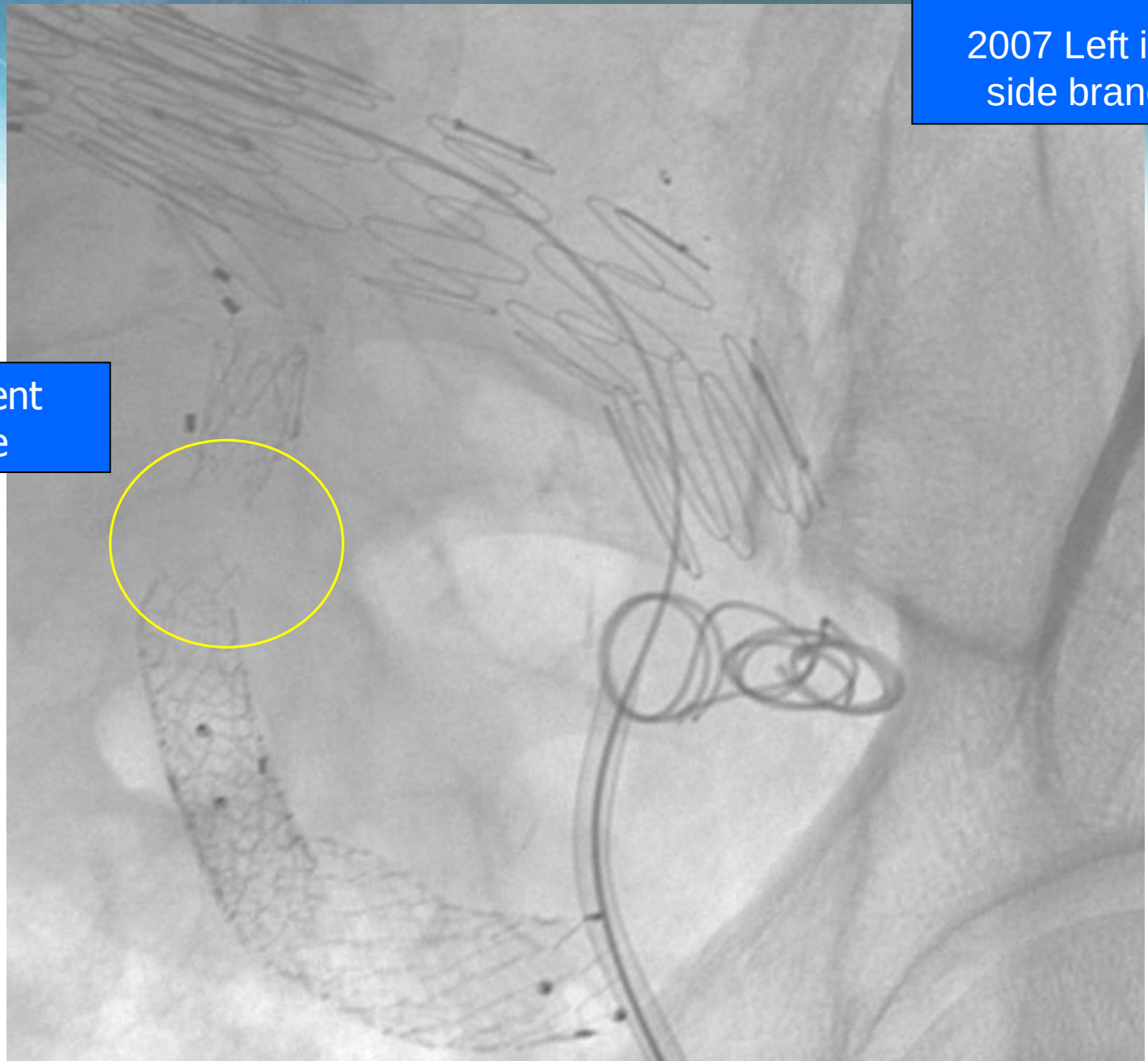
Limitations

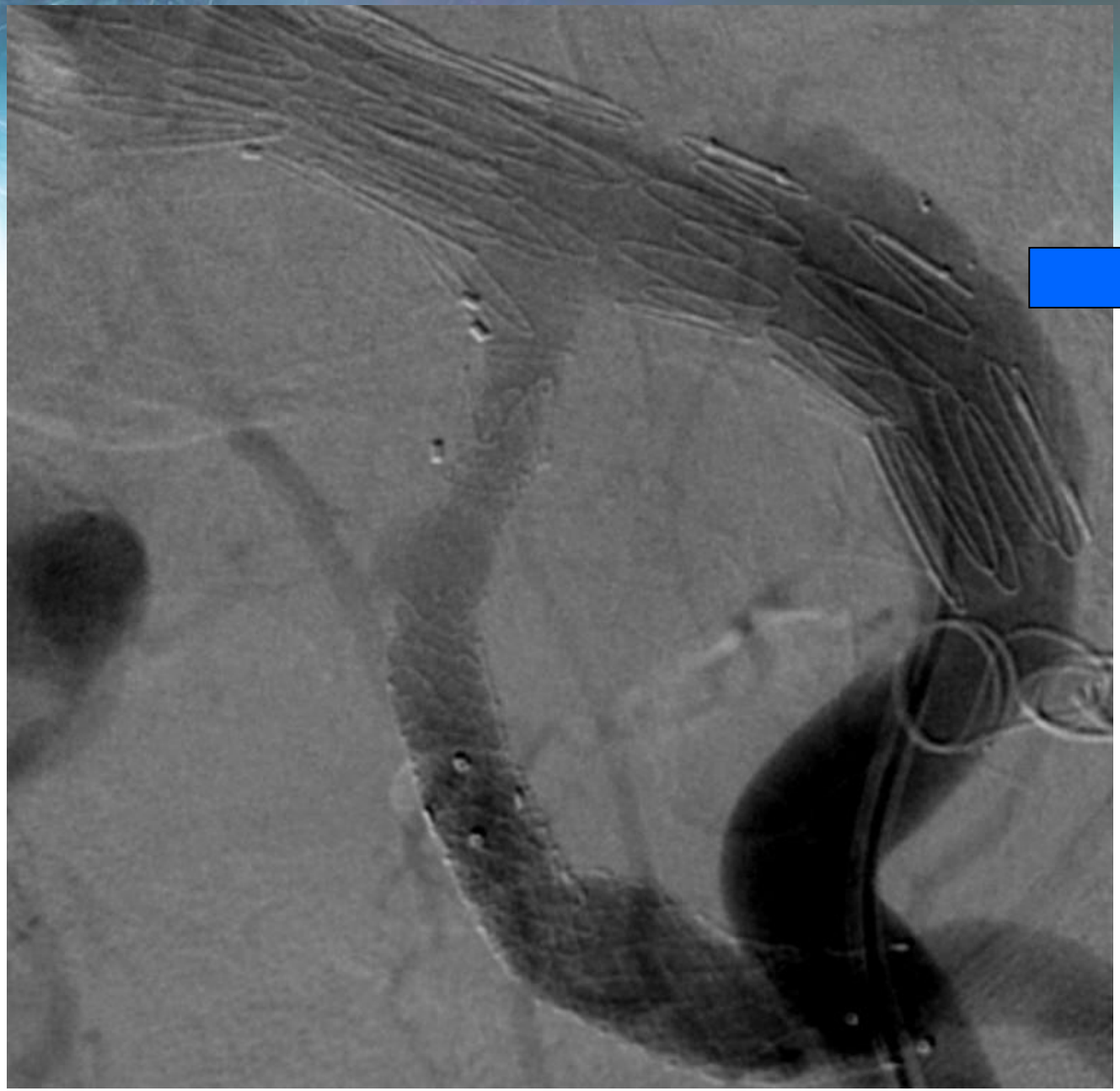
Male 60 y.o.

Left hypogastric aneurysm 60 mm

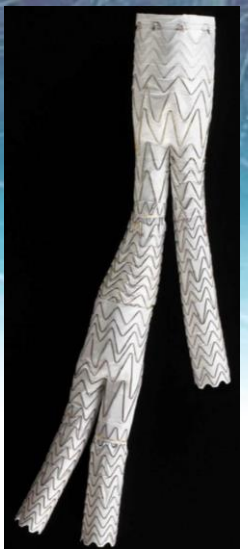
2007 Left iliac side branch

2012: Stent fracture





Distal Type I endoleak



Early experience with the Excluder® Iliac Branch Endoprosthesis

C. FERRER, F. DE CRESCENZO, C. COSCARELLA, P. CAO

J CARDIOVASC SURG 2014;55:679-83

TABLE I.—*Preoperative morphological characteristics.*

	Indication for treatment	CIA diameter (mm)	IIA diameter (mm)	IIA length (mm)	EIA diameter (mm)	Notes
Patient # 1	Left CIA aneurysm	33	7	30	9	AAA
Patient # 2	Left CIA aneurysm	35	10	18	11	Isolated CIA aneurysm
Patient # 3	Right CIA aneurysm	40	9	39	11	Previous EVAR with straight endograft
Patient # 4	Right CIA aneurysm	42	9	26	10	AAA
	Left CIA aneurysm	37	10	25	11	
Patient # 5	Right CIA aneurysm	35	12	43	13	AAA
	Left CIA aneurysm	31	12	35	12	

CIA: common iliac artery; IIA: internal iliac artery; EIA: external iliac artery; AAA: abdominal aortic aneurysm.

Device Specifics

- **Iliac branched component**

−Proximal diameter: 23 mm

−External iliac leg diameter: 10 / 12 / 14.5 mm

−Overall length: 10 cm

- **Internal iliac component**

−Overall length: 7 cm

−Distal diameter: 10 / 12 / 14.5 mm

−Deploys hub-to-tip

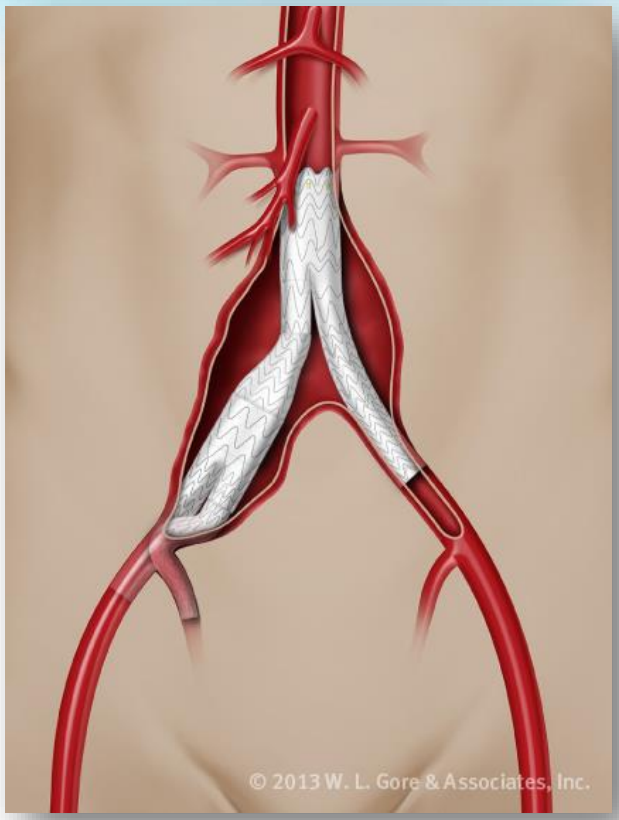
Anatomic Requirements

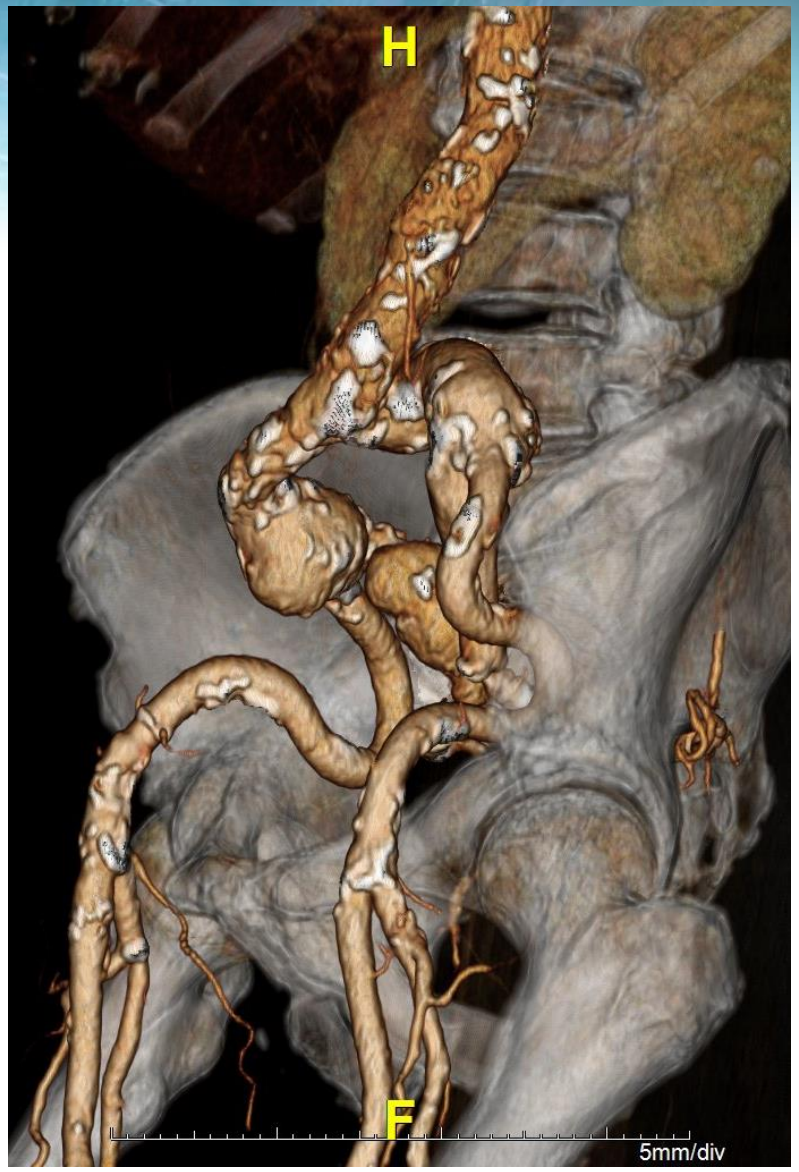
- **Proximal Common Iliac Diameter: ≥ 17 mm**

−Internal / external iliac diameter: 6.5–13.5 mm

−Distance from lowest renal to iliac bifurcation: ≥ 16.5 cm

−Minimum diameter at Iliac bifurcation ≥ 14 mm

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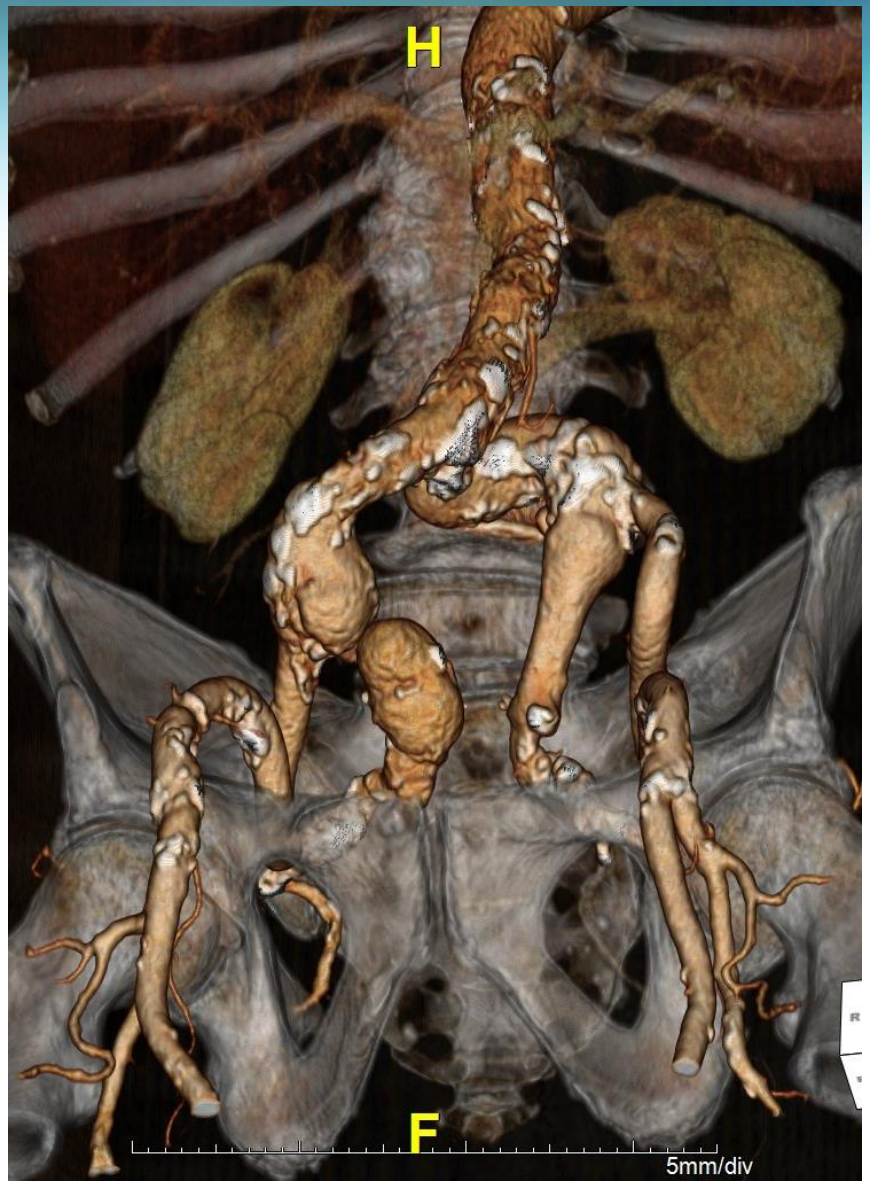
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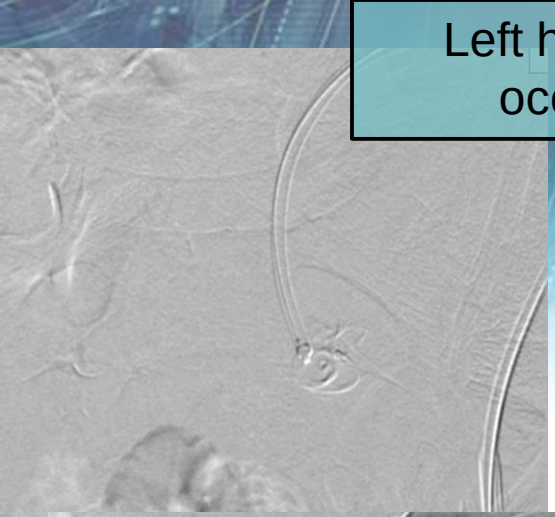
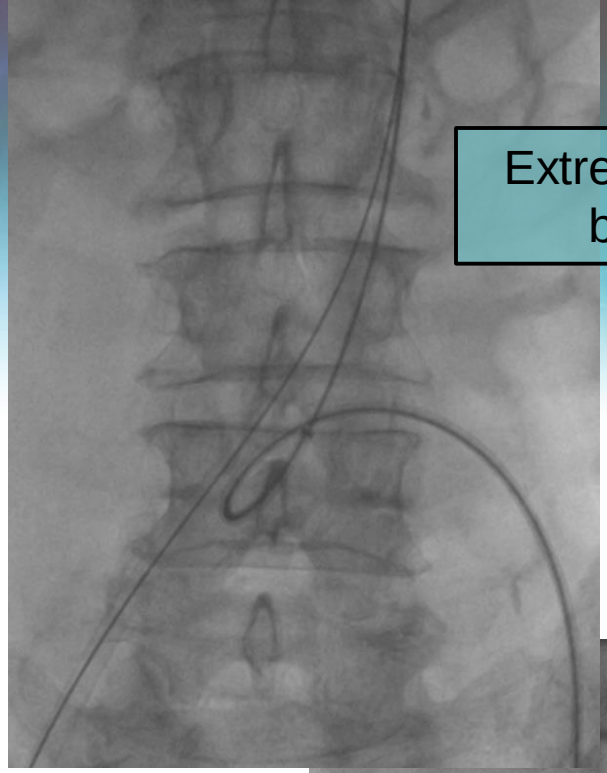
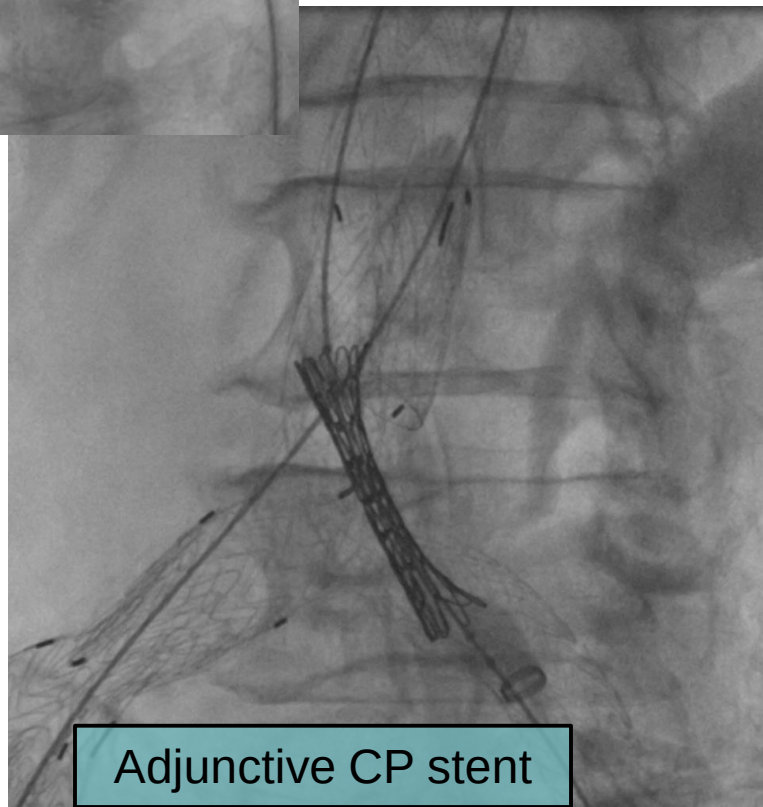


Left hypgastric occlusion



Extreme tortuosity: buddy wire

Right side branch



Adjunctive CP stent

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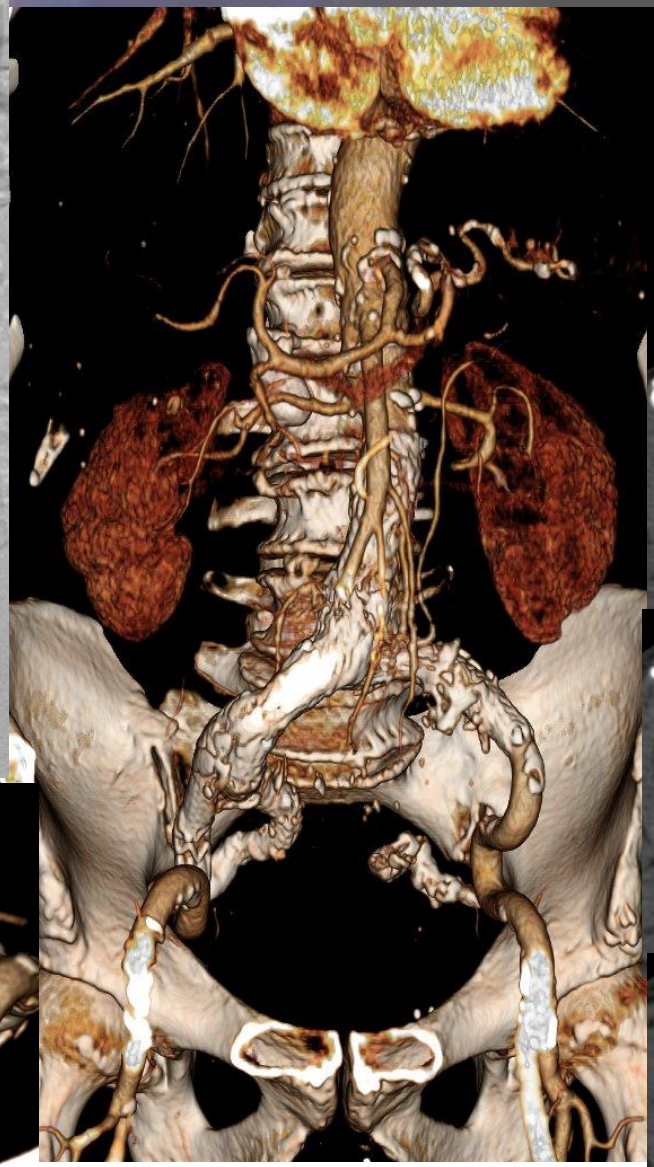

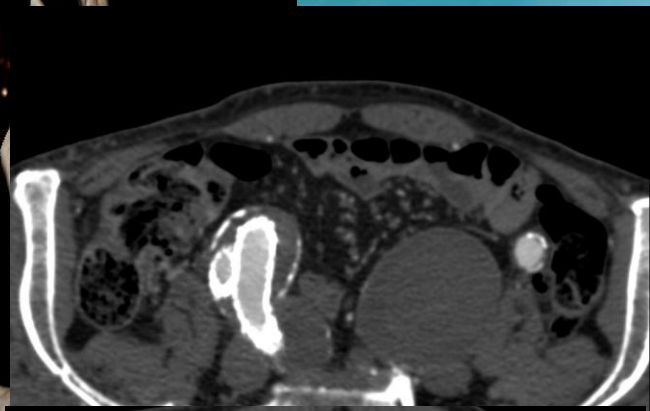

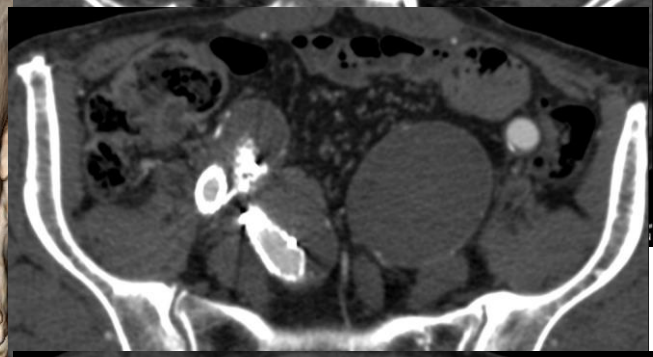

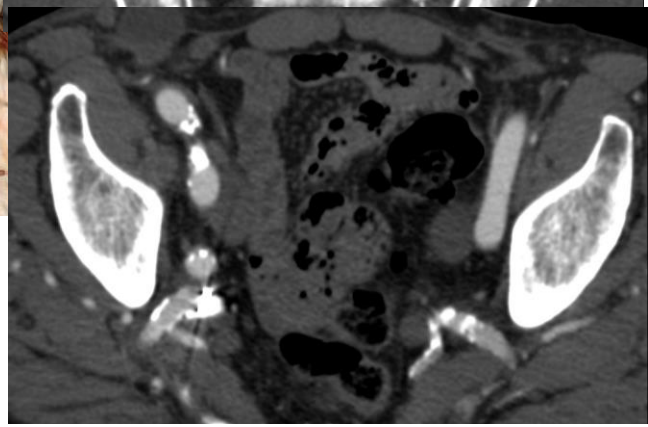

Perugia experience

14 Gore Excluder IBE implanted in 14 patients (2013-2015)

Mean follow-up 8 months

Technical & clinical success 100%

Type 2 endoleak 20%

No aneurysm growth

Internal iliac component patency was maintained in all cases

Conclusions

- Iliac branching is safe & effective in the long term
- Persisting iliac aneurysm exclusion @ 5 years with low rate of buttock claudication
- Multiple options available
- Newer devices are promising, long term results awaited