CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE

CONTROVERSIES & UPDATES IN VASCULAR SURGERY

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Iliac branch devices: what are the limits, are they durable?

Prof. Fabio Verzini, MD, PhD, FEBVS

University of Perugia, Italy

Disclosure

Speaker name:

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

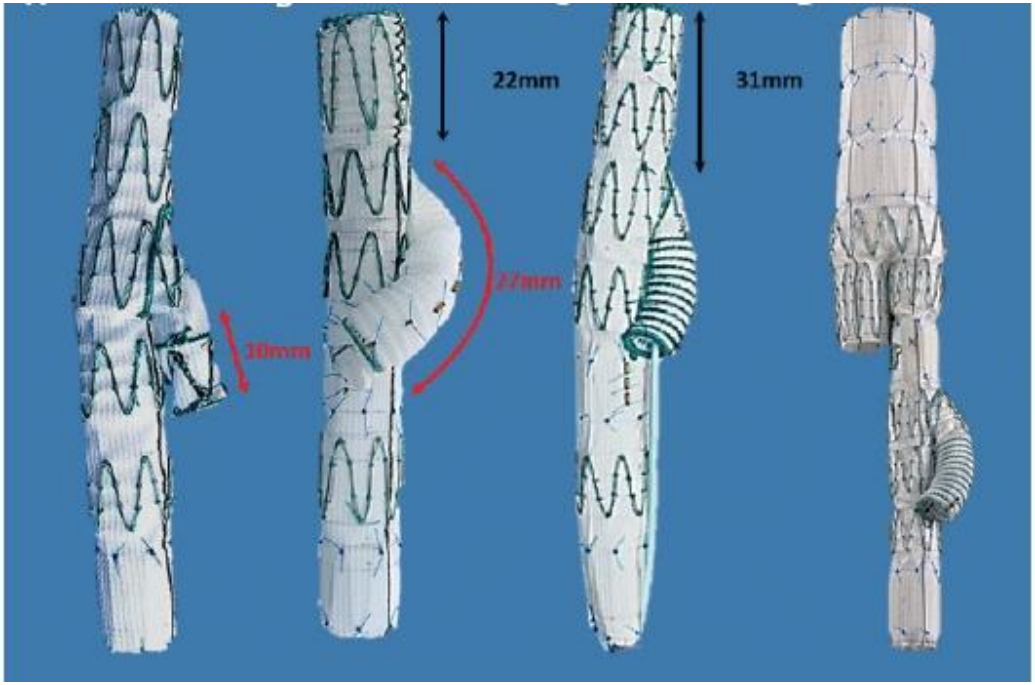
- ☐ I have the following potential conflicts of interest to report:
- ☐ Consulting : for Cook, Gore, Medtronic
- ☐
- ☐
- ☐
- ☐
- ☐

Buttock Claudication and Erectile Dysfunction After Internal Iliac Artery Embolization in Patients Prior to Endovascular Aortic Aneurysm Repair

H. S. Rayt · M. J. Bown · K. V. Lambert · N. G. Fishwick · M. J. McCarthy · N. J. M. London · R. D. Sayers

Cardiovasc Intervent Radiol (2008) 31:728–734

Study/year [ref. no.]	No. of patients	Buttock claudication (%)	Sexual dysfunction (%)
Mehta 2004 [18]	32	5 (16)	2/18 (11)
Engleke 2002 [6]	16	4 (25)	–
Schoder 2001 [20]	10	8 (80)	1/5 (20)
Mehta 2001 [17]	8	1 (13)	1/6 (18)
Razavi 2000 [8]	7	3 (43)	–
Wolpert 2001 [22]	7	4 (57)	–
Rhee 2002 [19]	6	2 (33)	–
Linn 2002 [16]	4	2 (50)	2/4 (50)
Total	90	29/90 (32)	6/33 (18)


22mm
31mm
10mm
27mm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Suitability

Endovascular Aneurysm Repair of Aortoiliac Aneurysms with an Iliac Side-branched Stent graft: Studying the Morphological Applicability of the Cook Device

D. Gray, R. Shahverdyan, C. Jakobs, J. Brunkwall *, M. Gawenda

Eur J Vasc Endovasc Surg (2015) 49, 283–288

Table 1. Instructions for use (Cook Zenith; Cook Medical, Bloomington, IN, USA).

CIA	IIA	EIA
L ≥ 50 mm	L ≥ 10 mm	L ≥ 20 mm
D ≥ 18 mm	D = adequate for distal sealing; Non-aneurysmal	D = 8–11 mm

Pts=66, Iliac Aneurysms =88

Suitability as per IFU: 40.9%

as per Authors 58%

Most common exclusion criteria: IIA Aneurysm

Suitability

Prospective, multicenter study of endovascular repair of aortoiliac and iliac aneurysms using the Gore Iliac Branch Endoprosthesis

Darren B. Schneider, MD,[a] Jon S. Matsumura, MD,[b] Jason T. Lee, MD,[c] Brian G. Peterson, MD,[d] Rabih A. Chaer, MD,[e] *and* Gustavo S. Oderich, MD,[f] *New York, NY; Madison, Wisc; Stanford, Calif; St. Louis, Mo; Pittsburgh, Pa; and Rochester, Minn*

J Vasc Surg 2017;66:775-85.

- **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

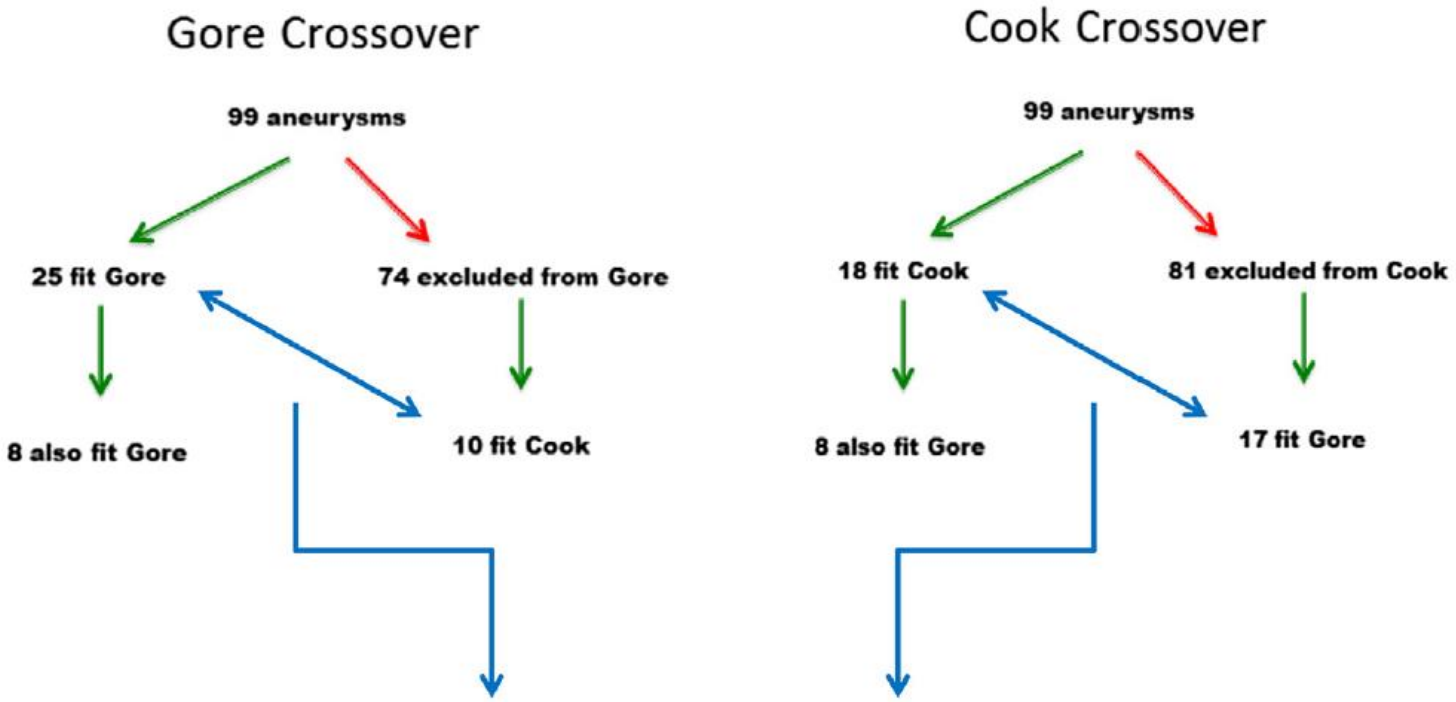
Screened pts =173, suitable pts= 64 (37%)

Suitability

Anatomic Suitability of Aortoiliac Aneurysms for Next Generation Branched Systems

Benjamin J. Pearce,[1] Vinit N. Varu,[2] Roan Glocker,[1] Zdenek Novak,[1] William D. Jordan,[1] and Jason T. Lee,[2] Birmingham, Alabama, Palo Alto, California

Ann Vasc Surg 2015; 29: 69–75



35/99 Patients Eligible if Both Trials Available

Outcomes

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

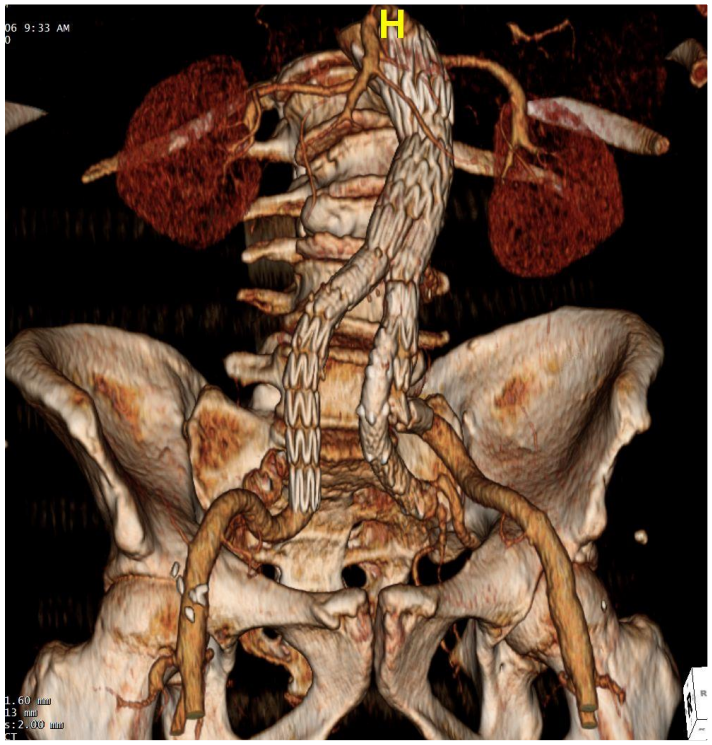


Table IV. One-year results

	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

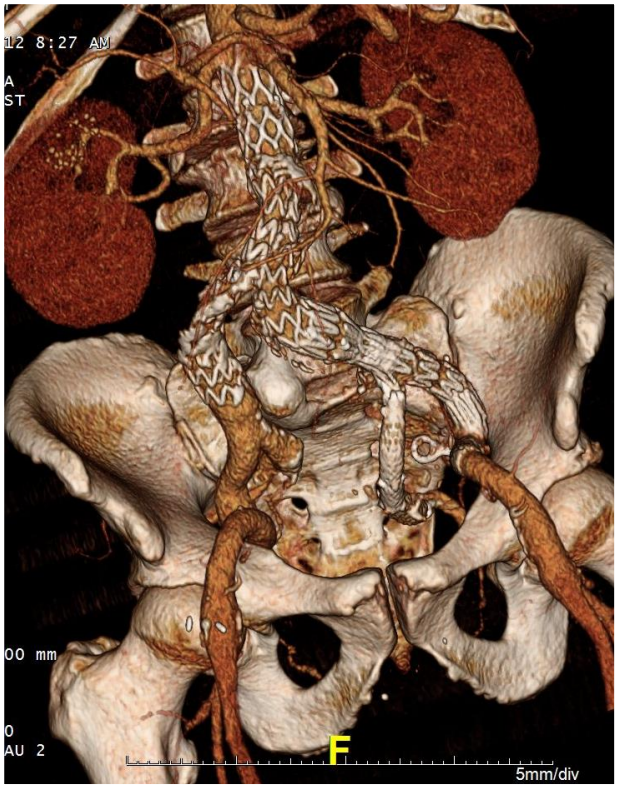
Lesson Learned with the Use of Iliac Branch Devices: Single Centre 10 Year Experience in 157 Consecutive Procedures☆

G. Simonte [a], G. Parlani [a,*], L. Farchioni [a], G. Isernia [a], E. Cieri [a], M. Lenti [a], P. Cao [b], F. Verzini [a]

Eur J Vasc Endovasc Surg (2017) 54, 95—103

2006-2016

- Isolated Common Iliac aneurysm ≥ 30 mm
- Aorto-iliac aneurysm >50 +common iliac >25 mm
- Internal iliac aneurysm >30 mm
- Distal type I endoleak with <10 mm common iliac neck length



IBD

Perioperative details (157 procedures)

Characteristics	n(%)
ZBIS Cook	134 (85.4)
IBE Gore	23 (14.6)
Balloon expandable stent	27 (17.2)
Self expandable stent	122 (77.7)
Isolated IBD	28 (17.8)
Local anesthesia	96 (61.1)
Percutaneous access	41 (26.1)
Contralateral hypogastric embolization	19 (12.1)
Visceral branch embolization and distal landing in the gluteal branch	9 (5.7)

Early procedure failure

Learning curve effect analysis

	n	Early failure N (%)
Initial period	25	4 (16.0)
Late period	132	3 (2.3)

Logistic regression analisys

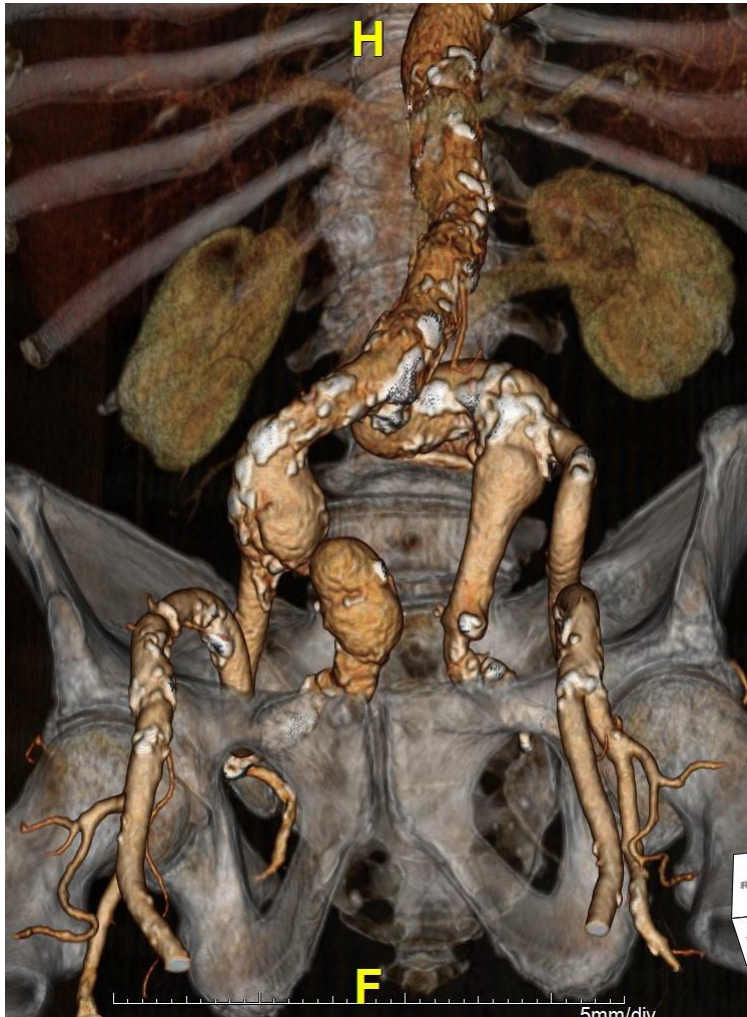
Independent predictors of early failure

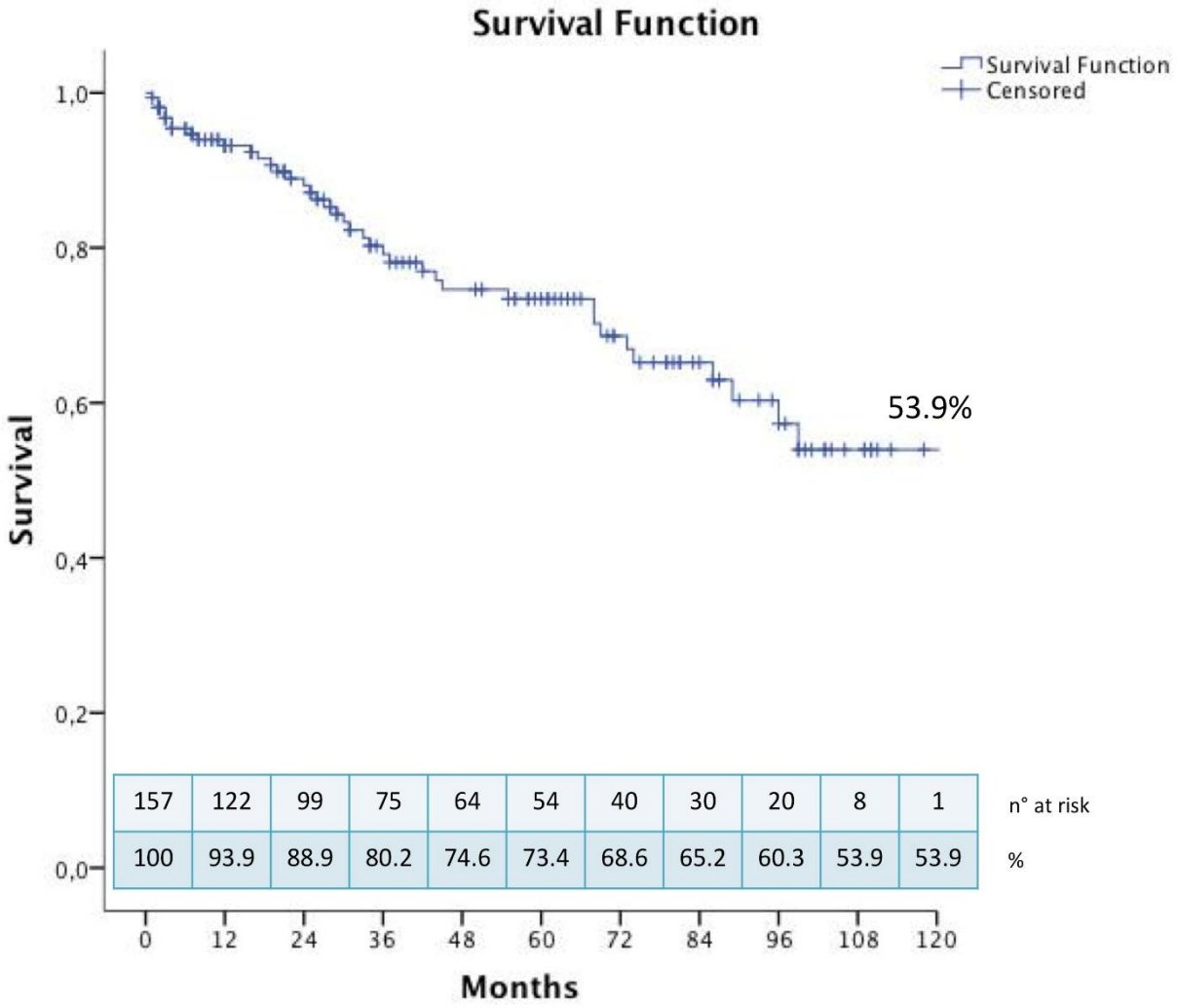
- Hypogastric aneurysm

HR 6.72; 95%CI 1.6-21.4, p=0.031

- Early period (first 25 cases)

HR 6.72; 95%CI 1.6-21.4, p=0.031

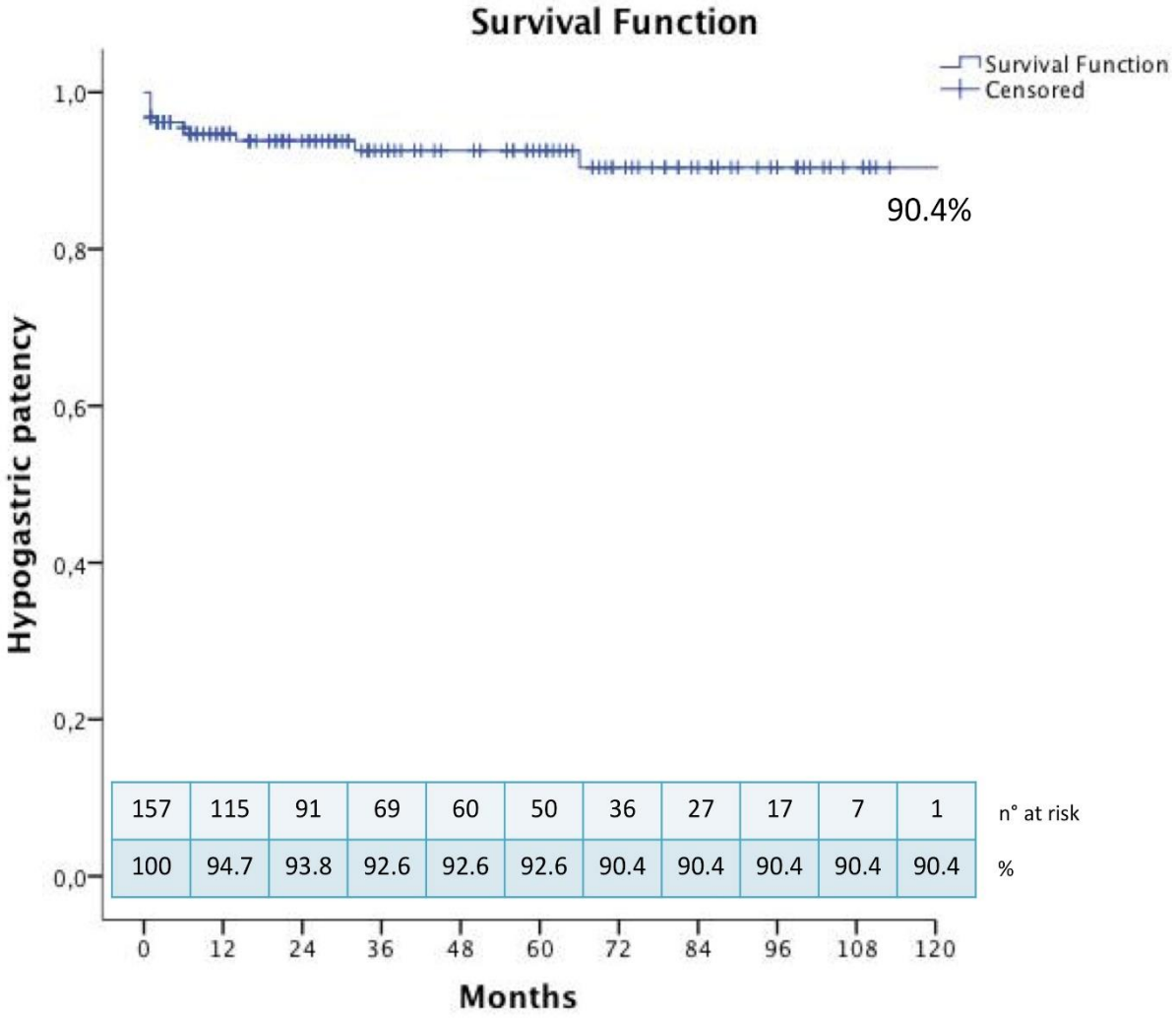




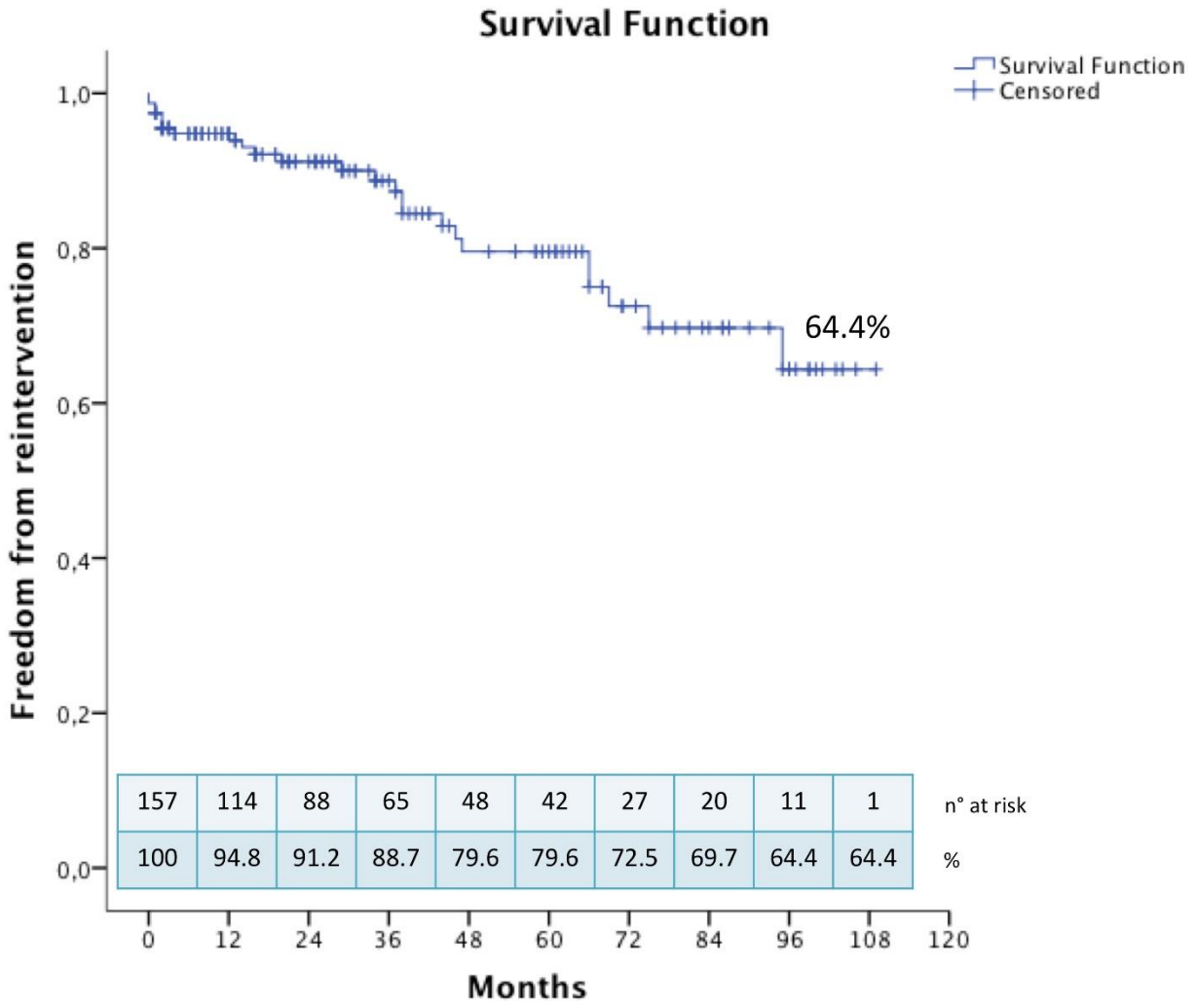
157	122	99	75	64	54	40	30	20	8	1
100	93.9	88.9	80.2	74.6	73.4	68.6	65.2	60.3	53.9	53.9

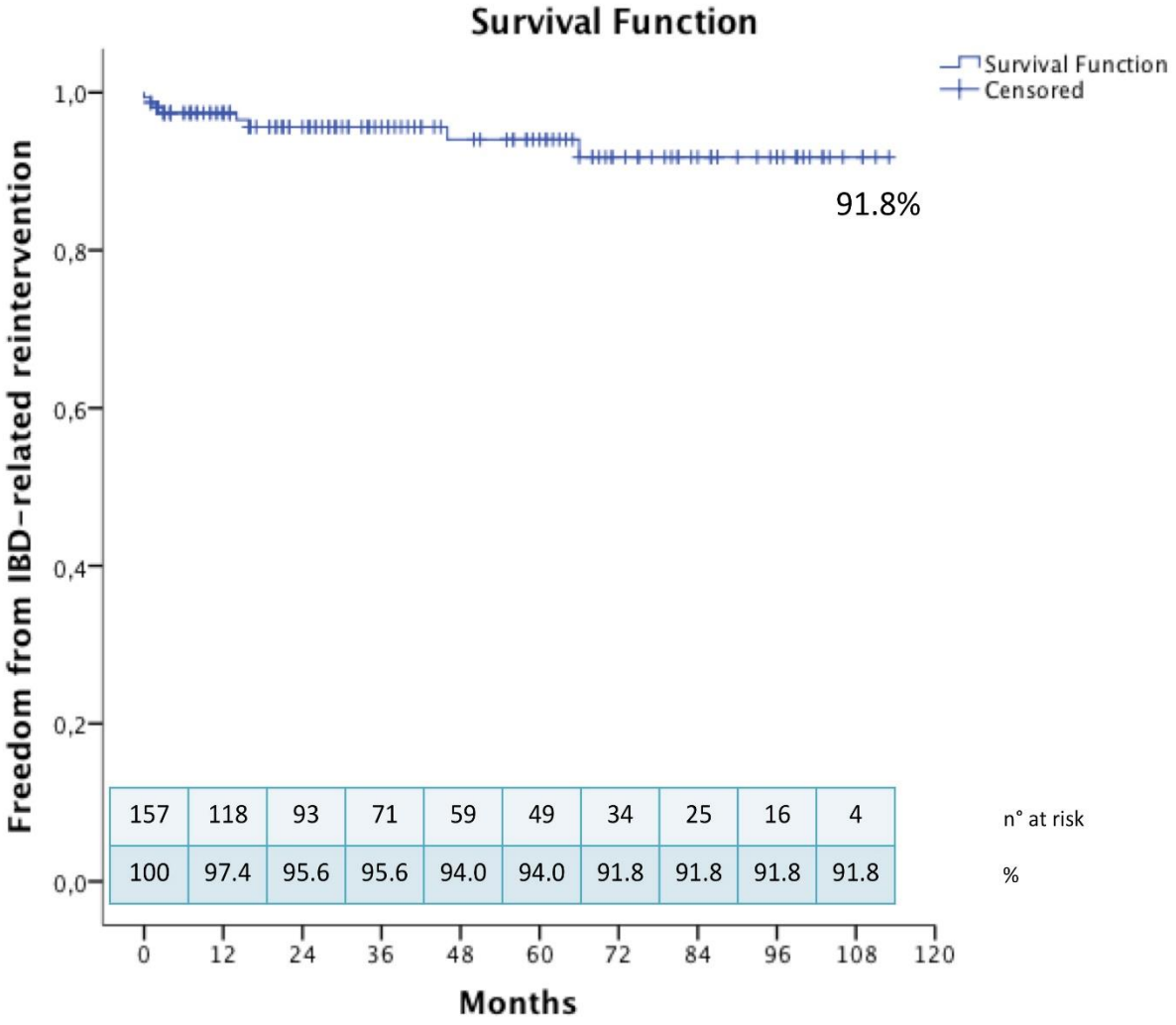
n° at risk

%



n° at risk	157	115	91	69	60	50	36	27	17	7	1
%	100	94.7	93.8	92.6	92.6	92.6	90.4	90.4	90.4	90.4	90.4

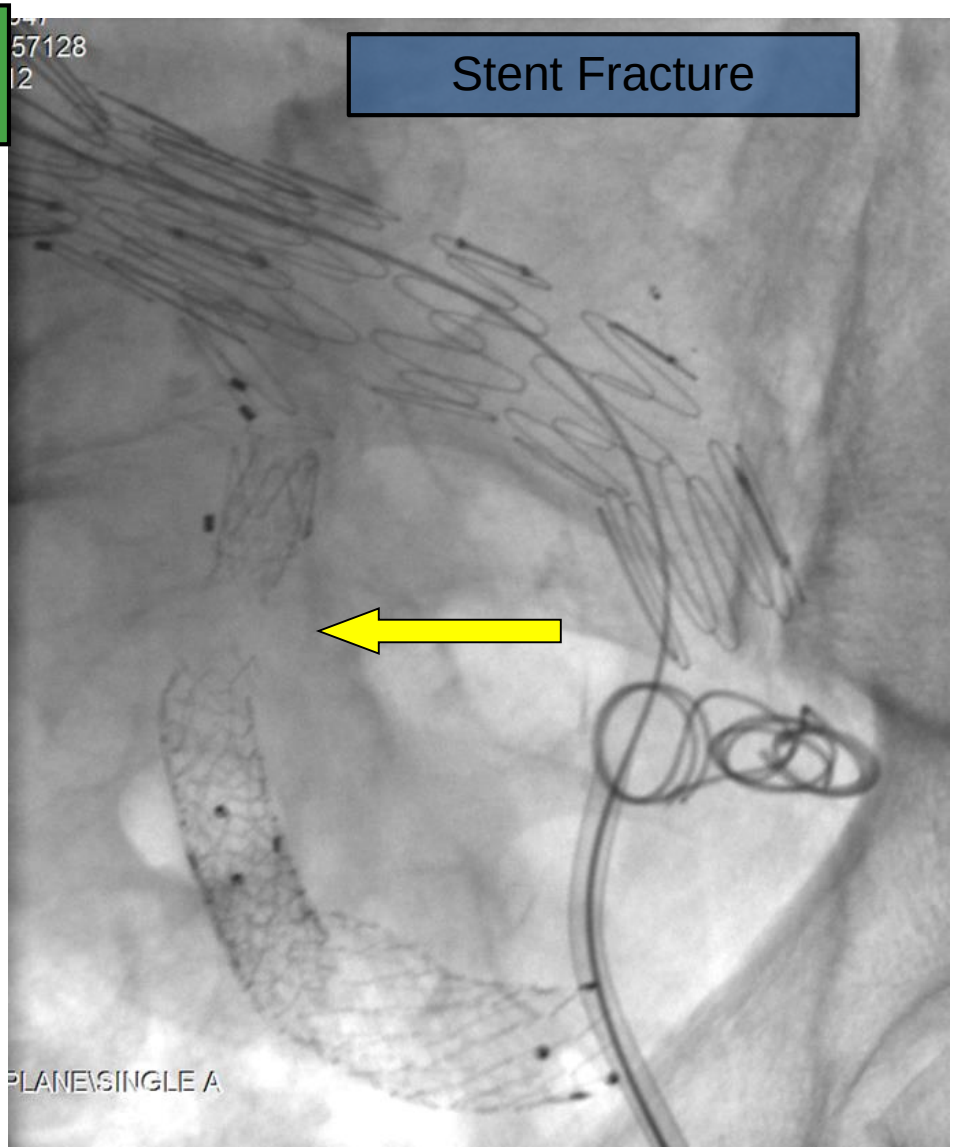

Survival Function
Survival Function
Censored
Freedom from reintervention
1,0
0,8
0,6
0,4
0,2
0,0
64.4%
0
12
24
36
48
60
72
84
96
108
120
Months
157 114 88 65 48 42 27 20 11 1
n° at risk
100 94.8 91.2 88.7 79.6 79.6 72.5 69.7 64.4 64.4
%


Survival Function
Survival Function
Censored
91.8%
Freedom from IBD-related reintervention
1,0
0,8
0,6
0,4
0,2
0,0
0 12 24 36 48 60 72 84 96 108 120
Months
157 118 93 71 59 49 34 25 16 4
n° at risk
100 97.4 95.6 95.6 94.0 94.0 91.8 91.8 91.8 91.8
%

Early possible complication

Occlusion

Long term possible complication



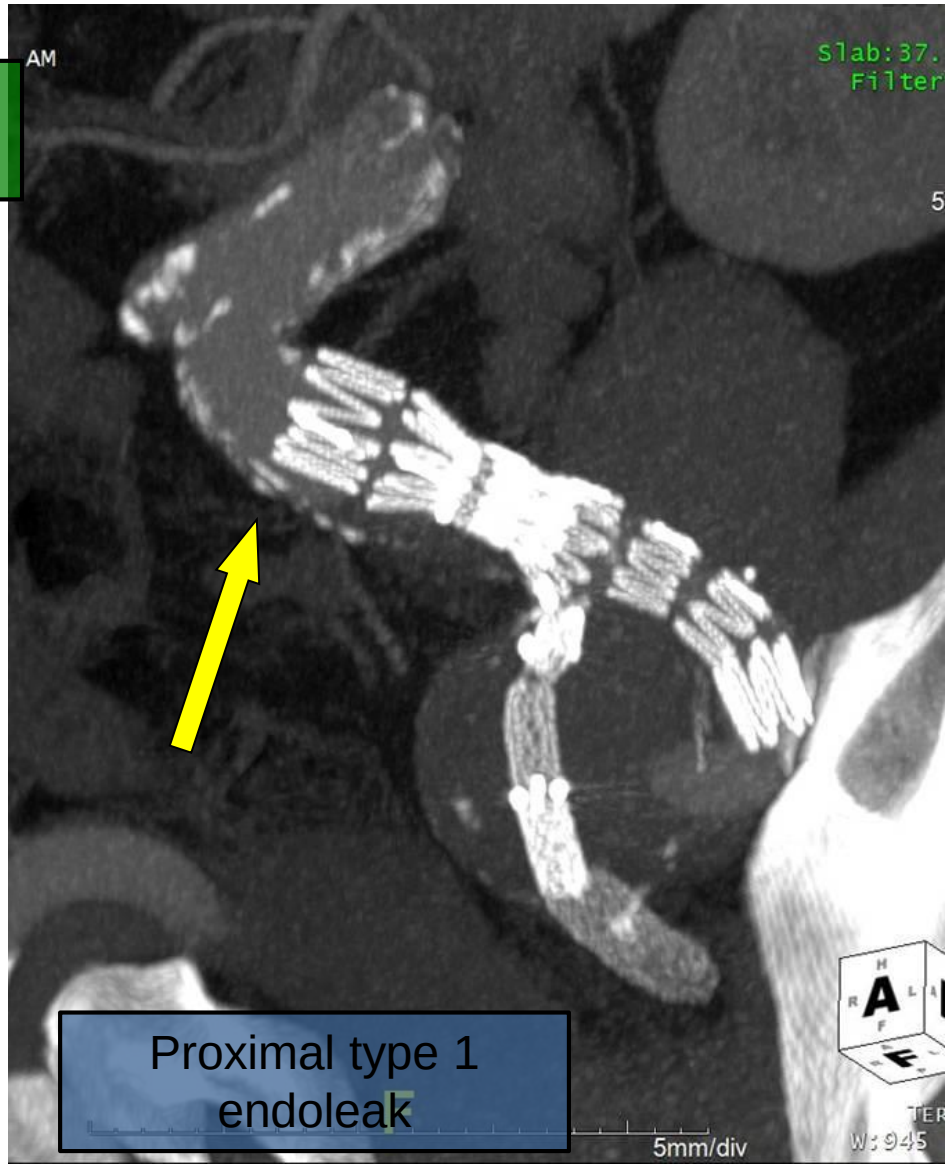
Stent Fracture

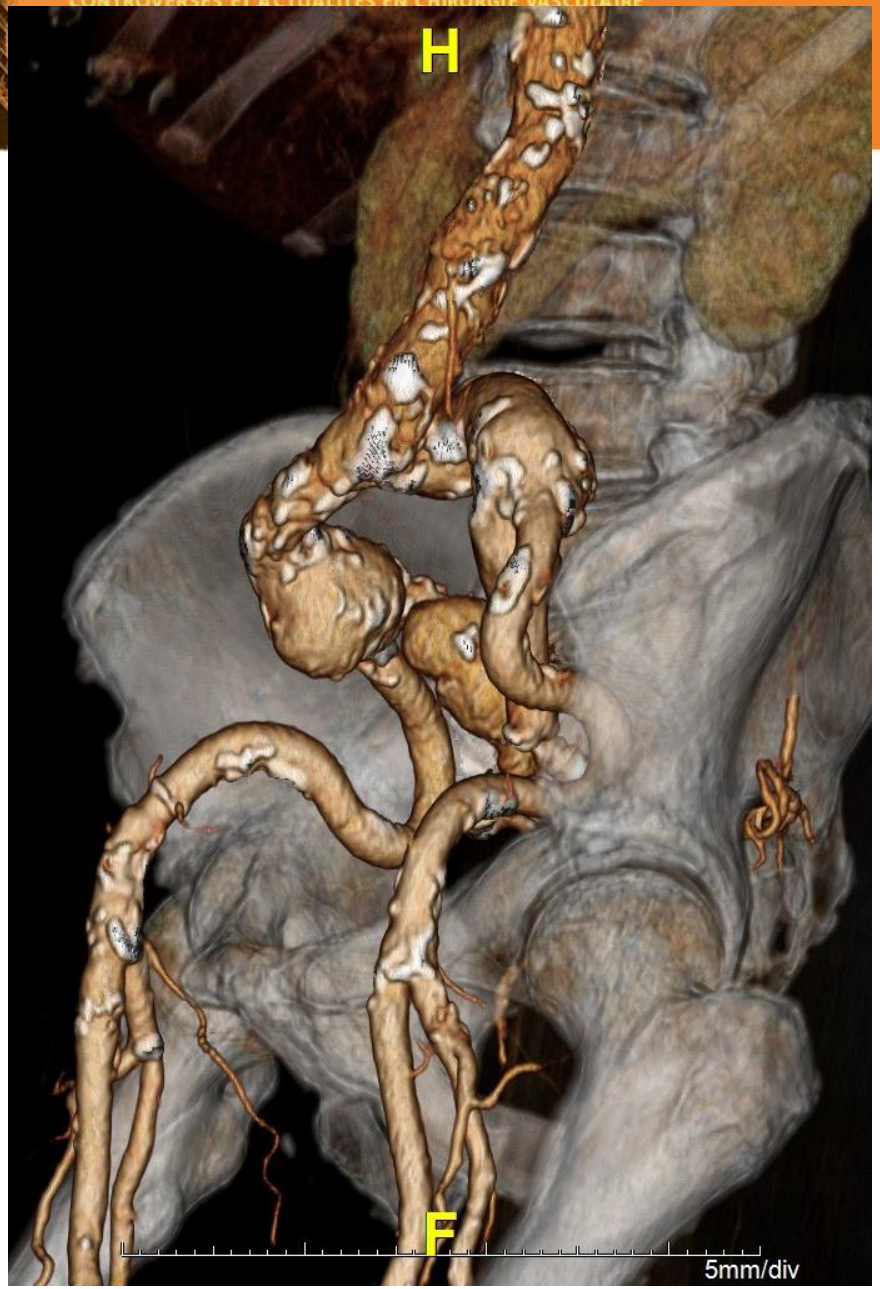
Long term possible complication

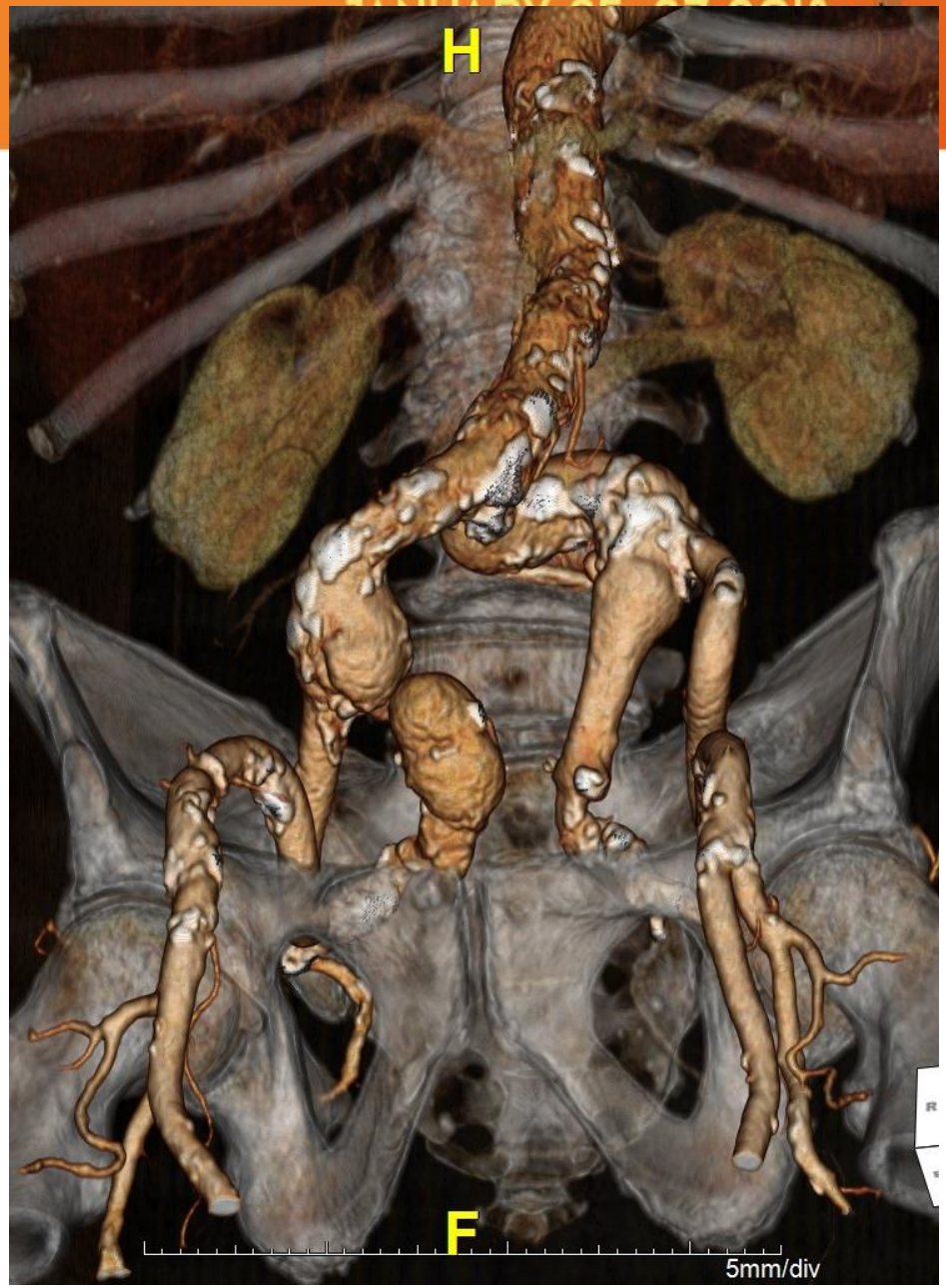
Distal type 1 endoleak

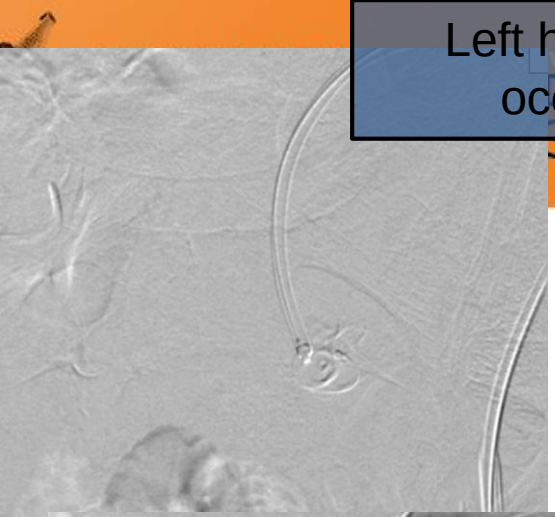
Isolated IBD prone to common iliac enlargement & type I EL

Long term possible complication

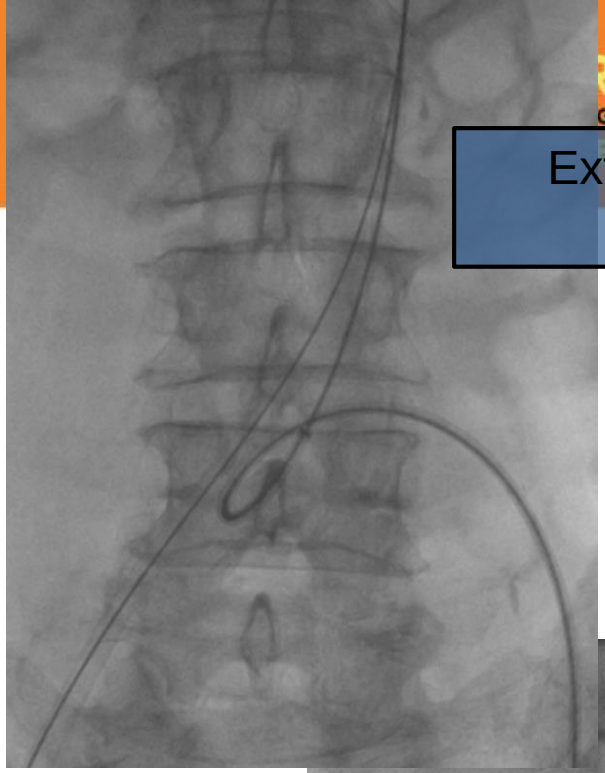



H
F
5mm/div


H
F
5mm/div

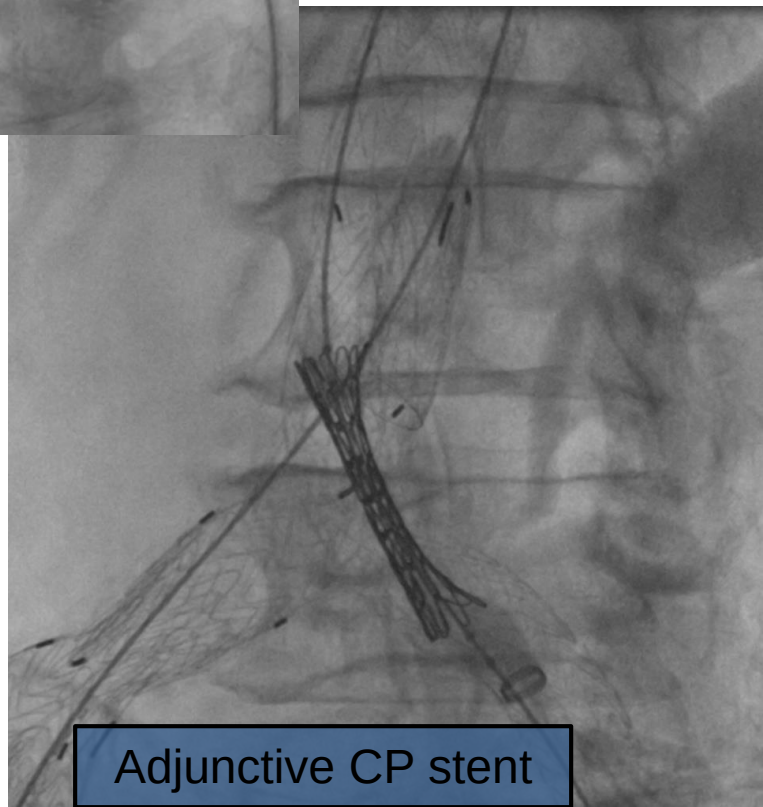


Left hypgastric occlusion



Extreme aortic tortuosity

Right side branch



Adjunctive CP stent

Final result

Conclusion

- IBDs: proven safety and efficacy (even in the long term)
- Few limitations exist, broadened indication for use in real world
- Different models may have different specific indications
- Gold standard Tx in suitable anatomies