

Why the preservation of the internal iliac arteries is essential

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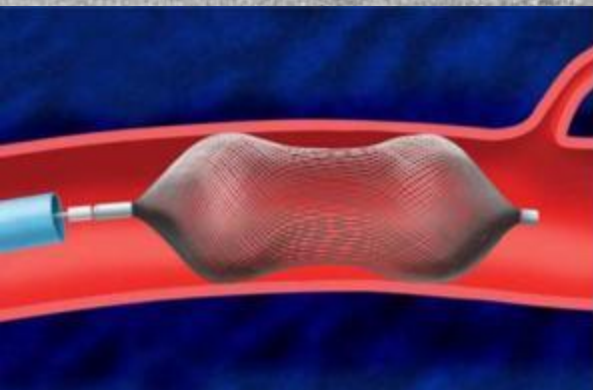
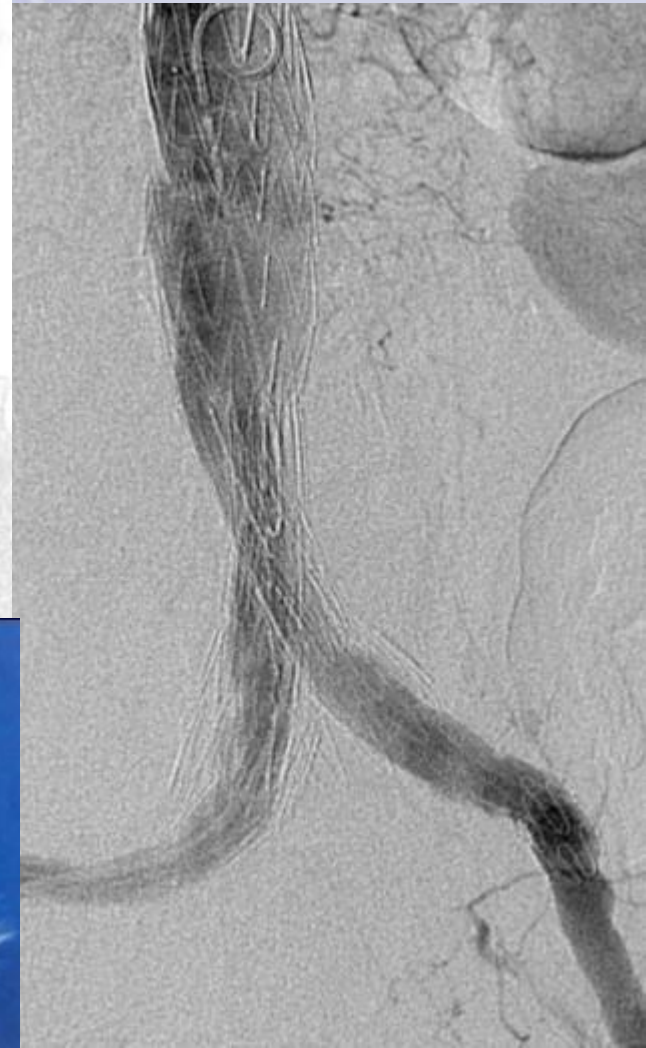
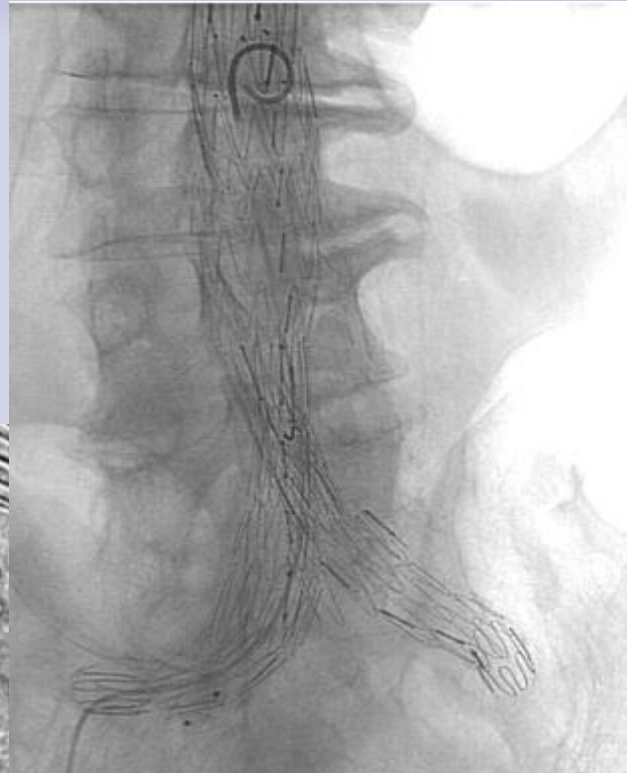
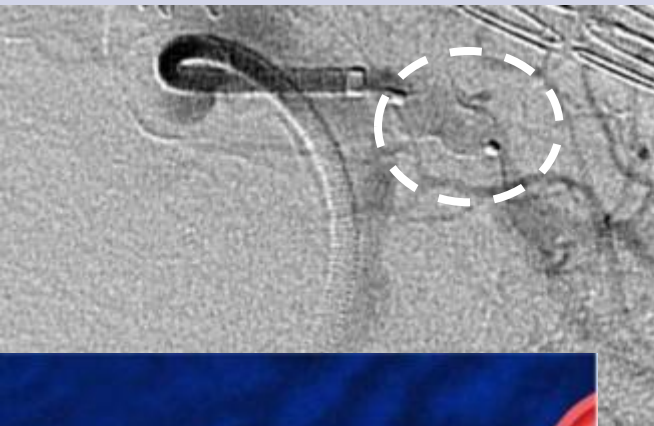
Disclosure

Speaker name:

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

- I have the following potential conflicts of interest to report:
- Consulting for Cook , Gore
- Employment in industry
- Shareholder in a healthcare company
- Owner of a healthcare company
- Other(s)
- I do not have any potential conflict of interest

Hypogastric occlusion



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

Bilateral HA occlusion

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)

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Unilateral HA occlusion

Study/year [ref. no.]	No. of patients	Buttock claudication (%)	Sexual dysfunction (%)
Mehta 2001 [17]	99	16 (16)	6/67 (9)
Rhee 2002 [19]	43	12 (28)	–
Schoder 2001 [20]	36	13 (36)	4/15 (27)
Razavi 2000 [8]	25	6 (24)	–
Lee 2001 [15]	23	9 (39)	–
Kritpracha 2003 [11]	20	9 (45)	–
Tefera 2004 [21]	13	4 (31)	–
Arko 2004 [9]	12	6 (50)	–
Wyers 2002 [23]	11	5 (45)	–
Wolpert 2001 [22]	11	4 (36)	–
Linn 2002 [16]	8	4 (50)	3/7 (43)
Total	301	88 (29)	13/89 (15)

Is Hypogastric Artery Embolization during Endovascular Aortoiliac Aneurysm Repair (EVAR) Innocuous and Useful?

P. Farahmand,¹ J.P. Becquemin,^{1*} P. Desgranges,¹ E. Allaire,¹
J. Marzelle¹ and F. Roudot-Thoraval²

Eur J Vasc Endovasc Surg Vol 35, April 2008

N=101, f-u: 32.4 \pm 22.2 months

- 50% suffered Buttock Claudication (BC)
- 33% BC did not improve during follow-up.
- 6.9% BC was severe and lasted for the entire follow-up
- 1 coil removal and by pass
- LV dysfunction, young age & coil embolization predictive of BC

J Vasc Interv Radiol. 2001 Jun;12(6):761-3.

Neurologic injury after endovascular stent-graft and bilateral internal iliac artery embolization for infrarenal abdominal aortic aneurysm.

Kwok PC, Chung TK, Chong LC, Chan SC, Wong WK, Chan MK, Chu WS.

Department of Radiology and Imaging, Queen Elizabeth Hospital, 30 Gascoigne Road, Kowloon, Hong Kong. pchkwok@ha.org.hk

Unilateral lower extremity paralysis after coil embolization of an internal iliac artery aneurysm

Boonprasit Kritpracha, MD, and Anthony J. Comerota, MD, *Toledo, Ohio*

J Vasc Surg 2004;40:819-21.

Ischaemic Colitis after Endovascular Repair of an Infrarenal Abdominal Aortic Aneurysm : a Case Report

I. Nevelsteen, J. Duchateau, Ph. De Vleeschauwer, J. De Leersnijder

Dept. of Vascular Surgery, AZ Sint-Maarten, Duffel, Belgium ; Dept. of Vascular Surgery, H. Hart, Lier, Belgium.

Acta chir belg, 2006, **106**, 588-591

Sloughing of the scrotal skin and impotence subsequent to bilateral hypogastric artery embolization for endovascular aortoiliac aneurysm repair

Peter H. Lin, MD, Ruth L. Bush, MD, and Alan B. Lumsden, MD, *Atlanta, Ga*

J Vasc Surg 2001;34:748-50

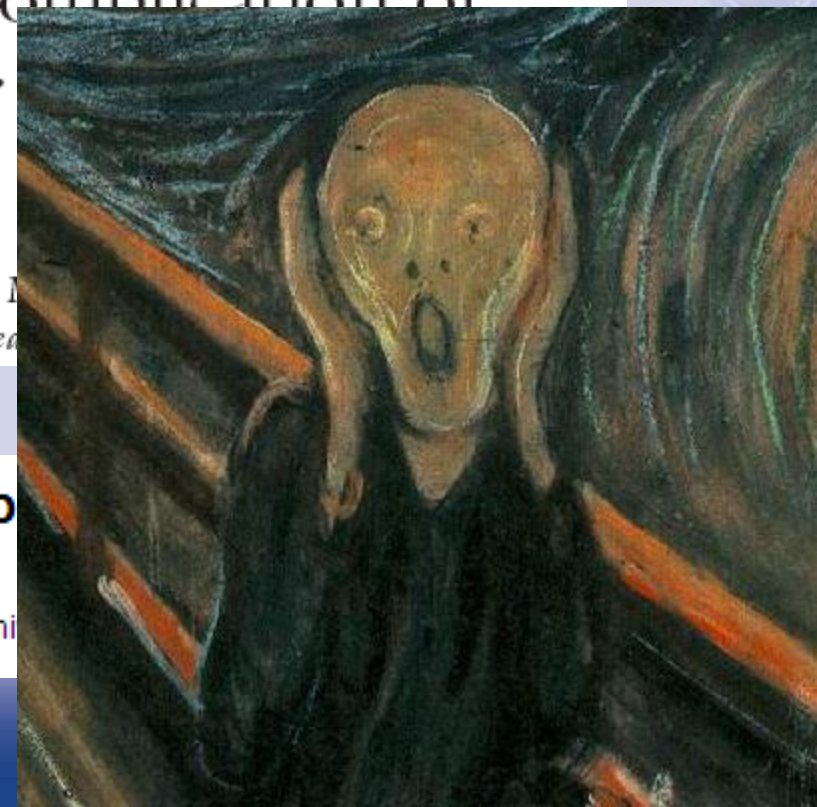
Testicular infarction: A rare complication of endovascular aneurysm repair of aortoiliac aneurysm

Adrian J. McKenna, MB, MRCS, Ivancarmine Gambardella, MD, Denis W. Harkin, MD, FRCS, *Belfast, Northern Ireland, United Kingdom*

Gangrene of bladder: Complication of hypogastric artery embolization

Zvi F. Braf M.D.^a and Warren W. Koontz Jr. M.D.^a

^aDivision of Urology, Medical College of Virginia, Virginia Commonwealth University



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

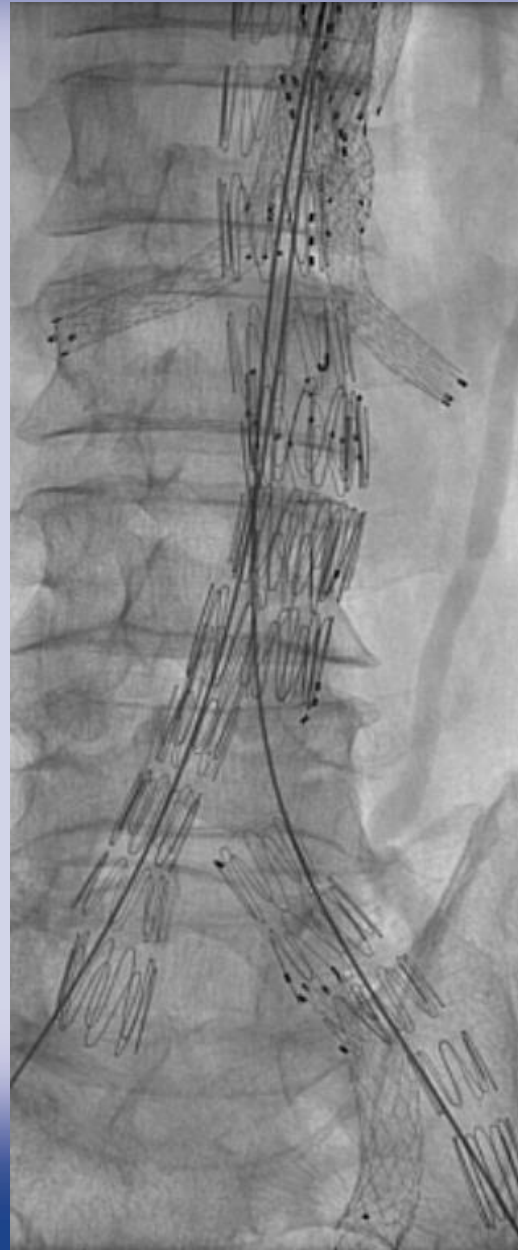
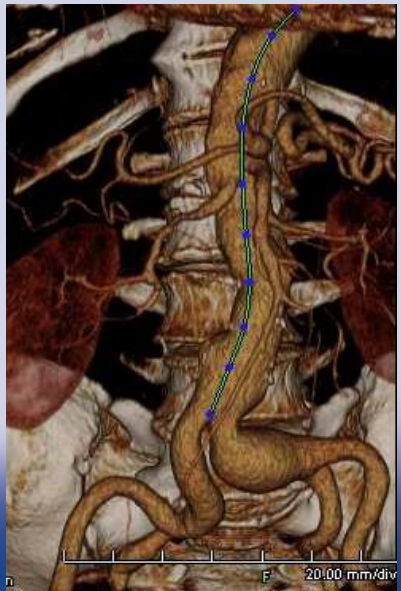
Elixène Jean-Baptiste, MD, PhD, Sophie Brizzi, MD, Michel A. Bartoli, MD, PhD, Nirvana Sadaghianloo, MD, Jean Baqué, MD, Pierre-Edouard Magnan, MD, Réda Hassen-Khodja, MD

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%

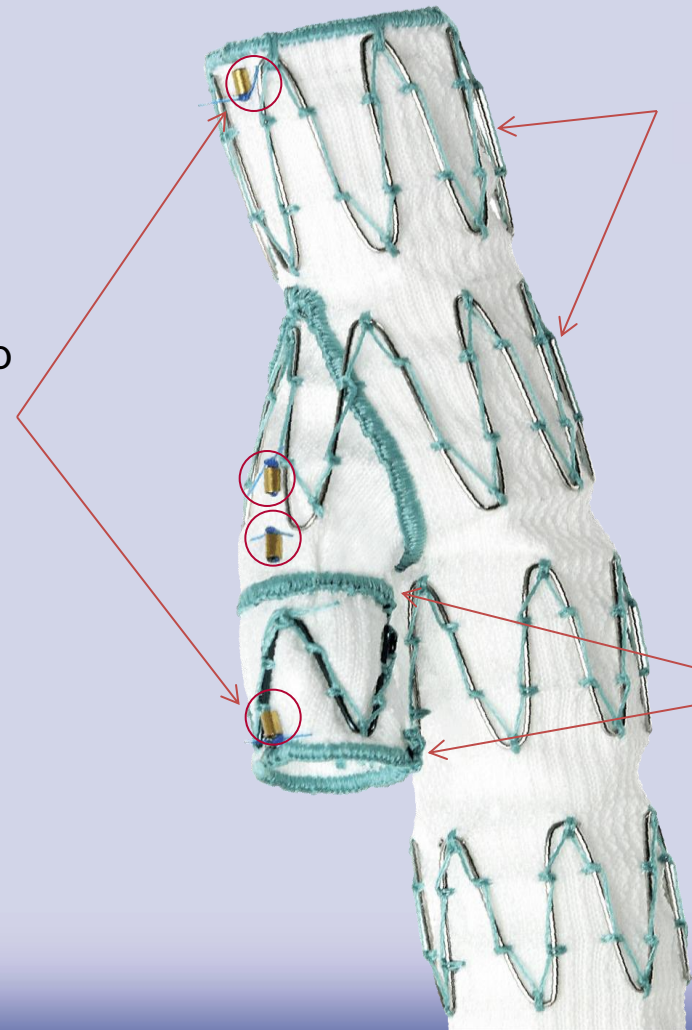
Risk factor for buttock claudication	OR
Young age	.92
Distal embolization	3.5

Occlusion NOT justified



Zenith Branch Iliac System

Radiopaque markers help with precise positioning



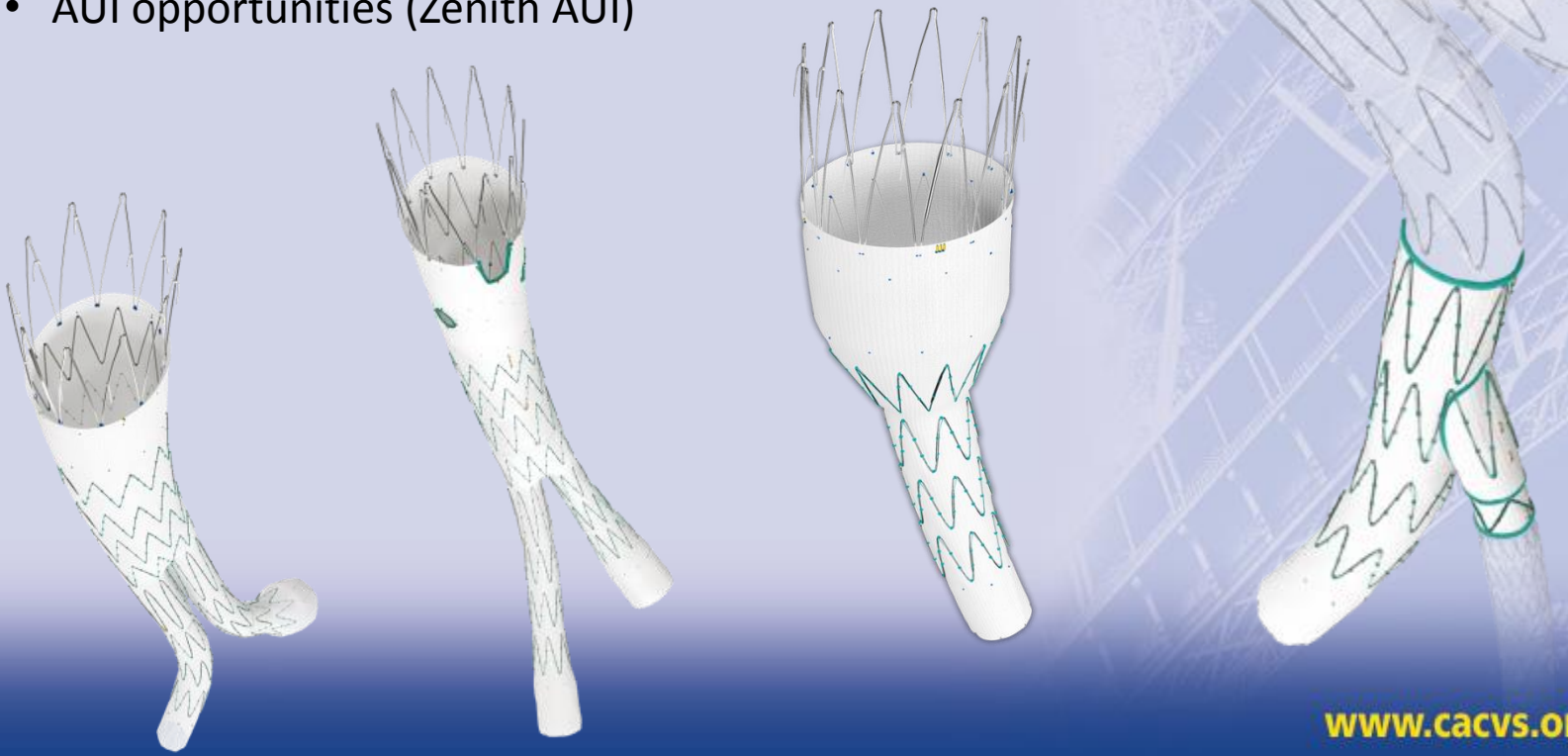
Cook Z-stent design helps secure and seal bridging stent

Sealing Rings

Sealing rings and nitinol Z-stent help secure internal iliac bridging stent and maintain lumen patency during access

Device Modularity

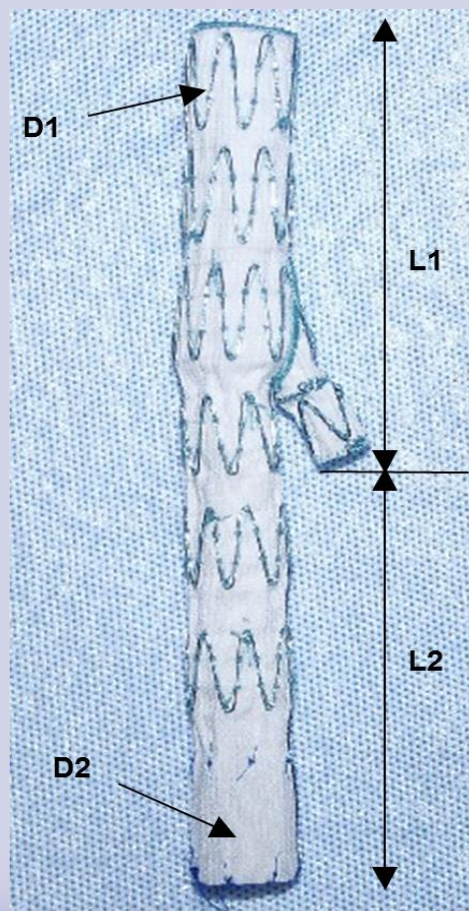
- **Compatible with the full Zenith portfolio:**
 - Preservation of internal iliac arteries (ZBIS)
 - AAA Repair (Zenith Flex)
 - Low Profile AAA repair (Zenith AAA LP)
 - Treatment of short necks (Zenith Fenestrated)
 - Repair of failed grafts (Zenith Renu)
 - AUI opportunities (Zenith AUI)



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





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”

	<i>Open (n = 54)</i>	<i>Endovascular (n = 64)</i>	<i>P</i>
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



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

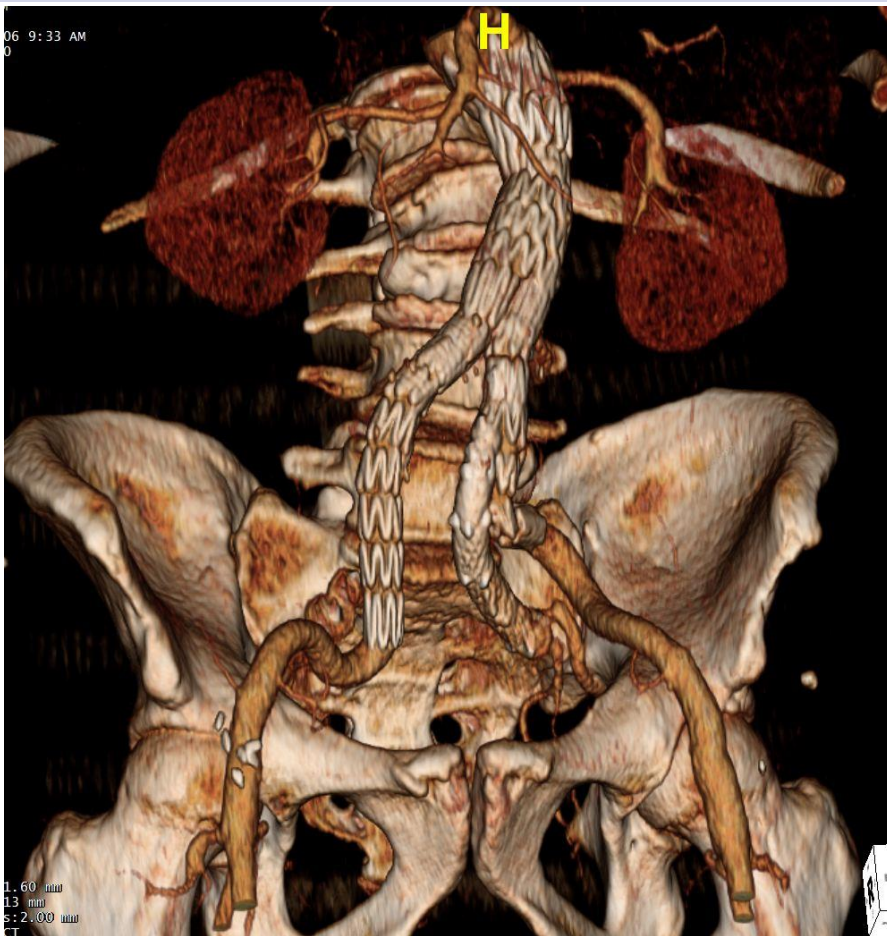


Table IV. One-year results

<i>Patients</i>	<i>Group I = 23</i>		<i>Group II = 37</i>		<i>P</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
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

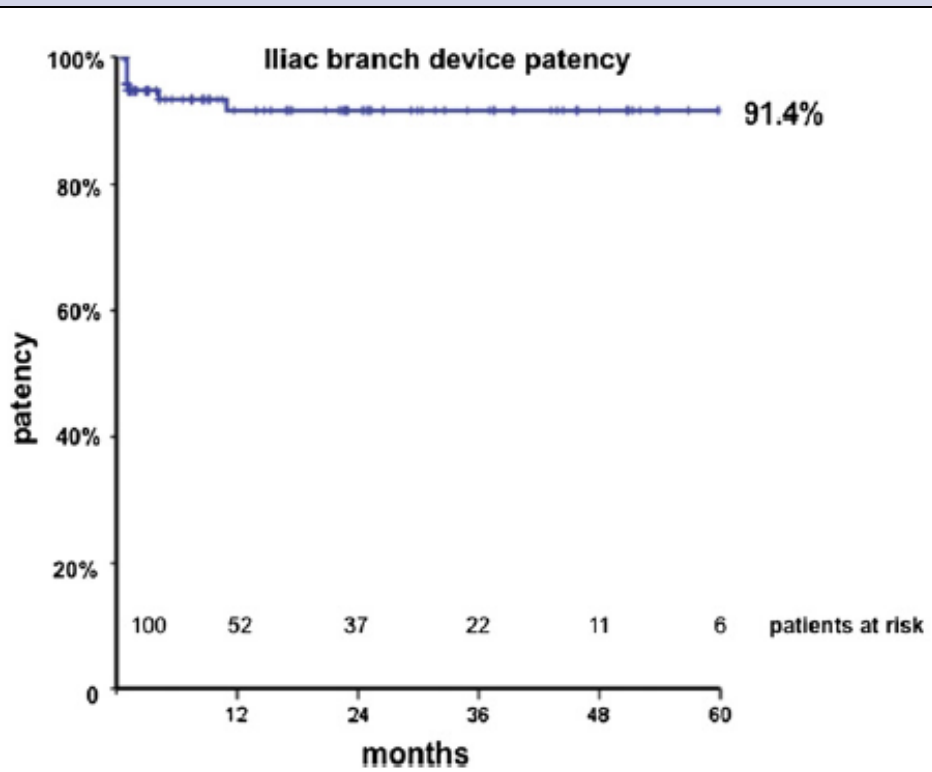


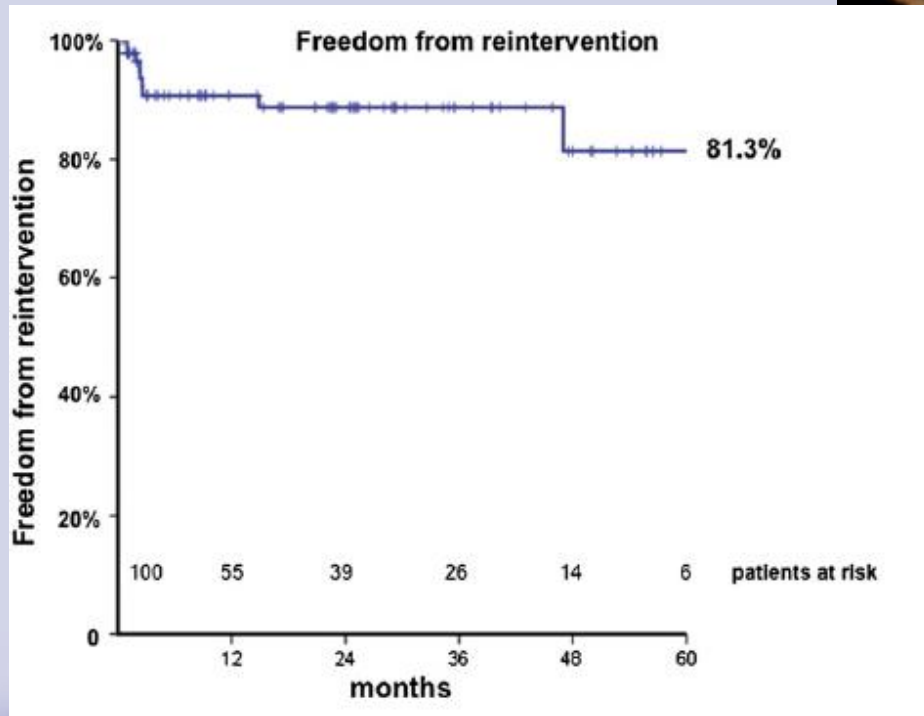
Figure 3. Kaplan–Meier estimates of internal iliac side-branch patency rate.



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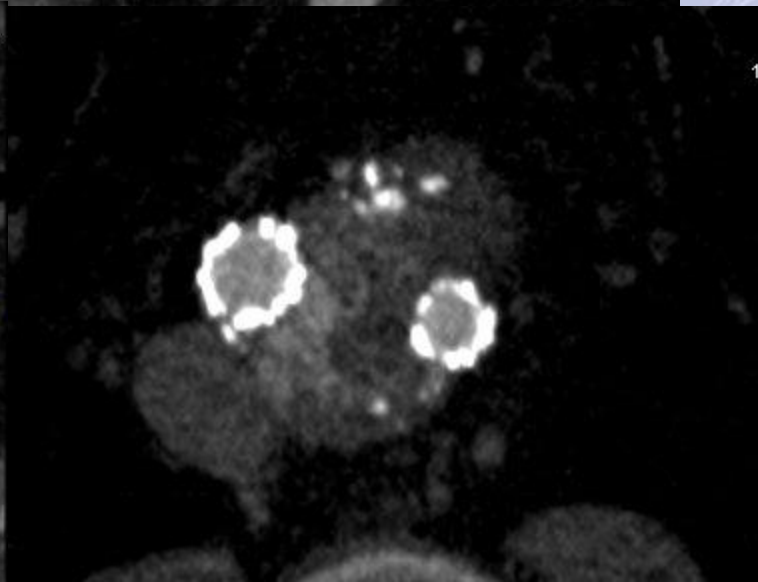
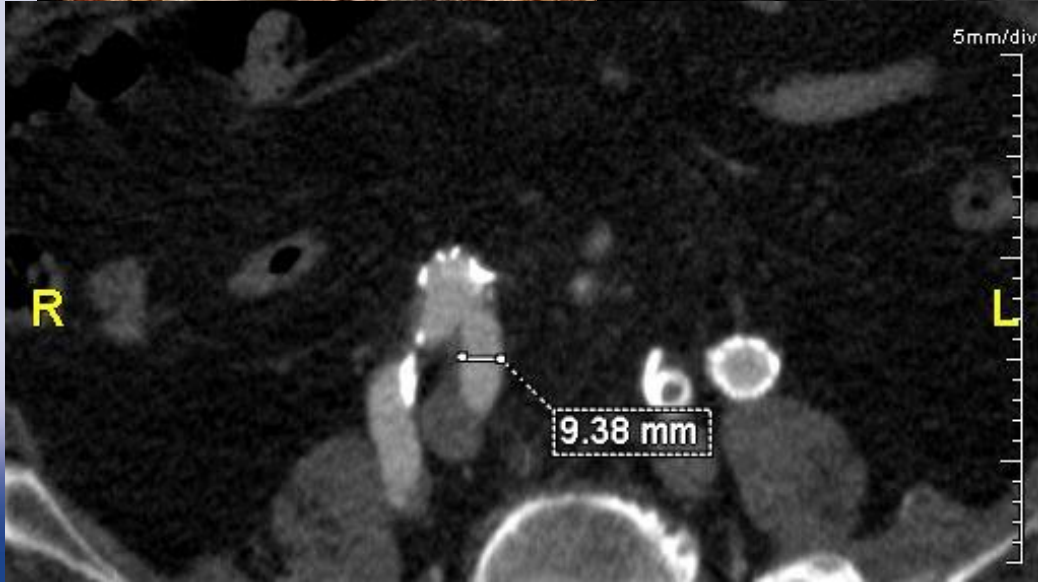
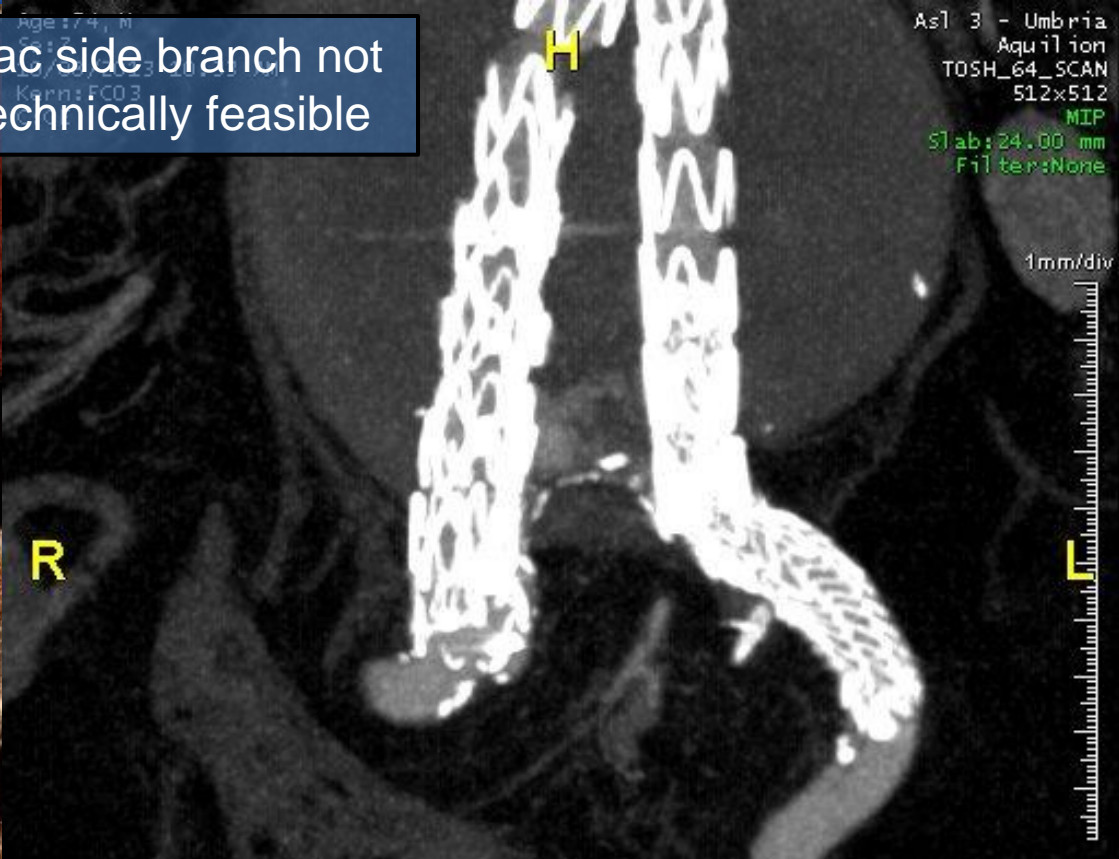


Limitations





Iliac side branch not technically feasible



Conclusions

- IBD is safer than HA occlusion & Open repair
- Persisting iliac aneurysm exclusion @ 5 year with low rate of buttock claudication
- IBD can be considered as the first option in patient with extensive iliac aneurysm disease with favorable anatomy

