

CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE  
CONTROVERSIES & UPDATES IN VASCULAR SURGERY

**JANUARY 19-21 2017**

MARRIOTT RIVE GAUCHE & CONFERENCE CENTER

**PARIS, FRANCE**



# How to exclude hypogastric artery aneurysms

Jan Brunkwall



## Disclosure

Speaker name:

.....Jan Brunkwall.....

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



# Background

- About 20% of patients with AAA also have iliac artery aneurysm





# Endovascular treatment options

1. Coiling + EVAR into the external iliac arteries
2. Flared limbs (up to 27mm)
3. Iliac side branch



# Buttock claudication after iliac coiling

**Table 5.** Follow-Up Buttock Claudication

	Acute	1 Month	3 Months	6 Months	12 Months	24 Months
Interventions (n)	20/44	23/44	15/34	11/28	9/24	3/11





# Buttock claudication after iliac coiling

**Table 7. Bibliographic Review**

First Author (year)	No. of patients	Claudication, n (%)
Lee (2000) <sup>18</sup>	27	5 (19)
Criado (2000) <sup>21</sup>	39	5 (13)
Cynamon (2000) <sup>22</sup>	34	13 (41)
Razavi (2000) <sup>31</sup>	32	9 (28)
Karch (2000) <sup>25</sup>	22	7 (32)
Wolpert (2001) <sup>36</sup>	18	8 (44)
Yano (2001) <sup>7</sup>	103	21 (20)
Lyden (2001) <sup>28</sup>	23	7 (30)
Schoder (2001) <sup>33</sup>	46	21 (46)
M L R L E V K M A T Z F B		
Vandy (2008) <sup>32</sup>	23	7 (35), <sup>a</sup> 2(9) <sup>b</sup>
Rayt (2008) <sup>10</sup>	29	16 (55)
Verzini (2009) <sup>14</sup>	37	8 (22)
Maleux (2010) <sup>29</sup>	13	5 (38)
Wu (2011) <sup>13</sup>	106	5 (35.7), <sup>a</sup> 12(13.8) <sup>b</sup>
Overall	1001	300 (29.97)

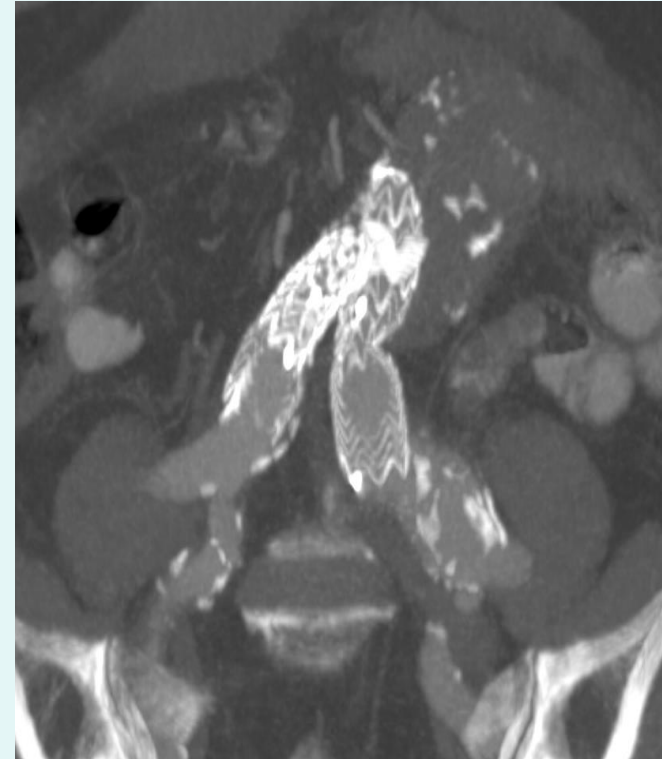
**30%**



# Introduction

≈20% of EVARtreated AAAs have aneurysmal common iliac arteries CIA (>16mm)<sup>1,2</sup>

CIAs up to 25mm can be treated with flared iliac limbs<sup>3</sup>



<sup>1</sup>Parlani et al, Eur J Vasc Endovasc Surg 2002

<sup>2</sup>Hobo et al, EUROSTAR Registry, J Endovasc Ther 2008

<sup>3</sup>Torsello et al, J Endovasc Ther 2010



# Follow-up

Mean CT- follow-up was **53 months (33-116)**

No immediate type 1b endoleak post-implantation at CT scan in any iliac limb





# Results

	<20mm	≥20mm	t-test
<b>Type 1b endoleak</b>	<b>7 (4%)</b>	<b>11 (15%)</b>	<b>p&lt;0,001</b>

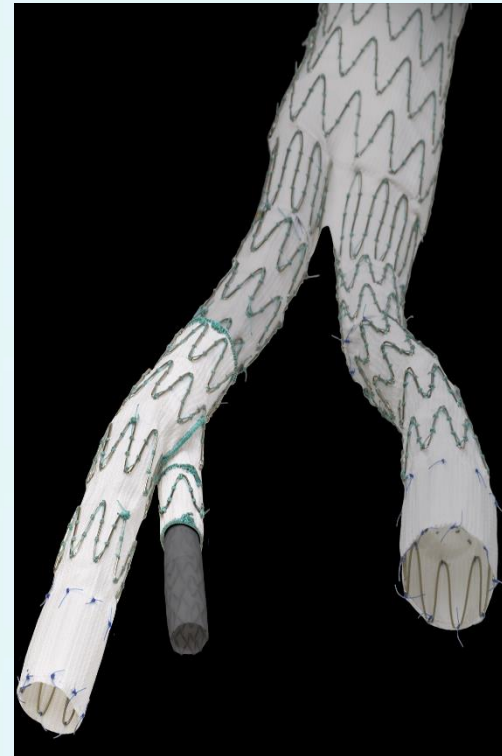


# Intr: Aneurysmal landing zone CIA (16-25mm):

**Flared limbs?**



**IBD?**





# Iliac side branches

## Gore Excluder



## Cook ZBIS





# Iliac side branches

## Jotec E-liac





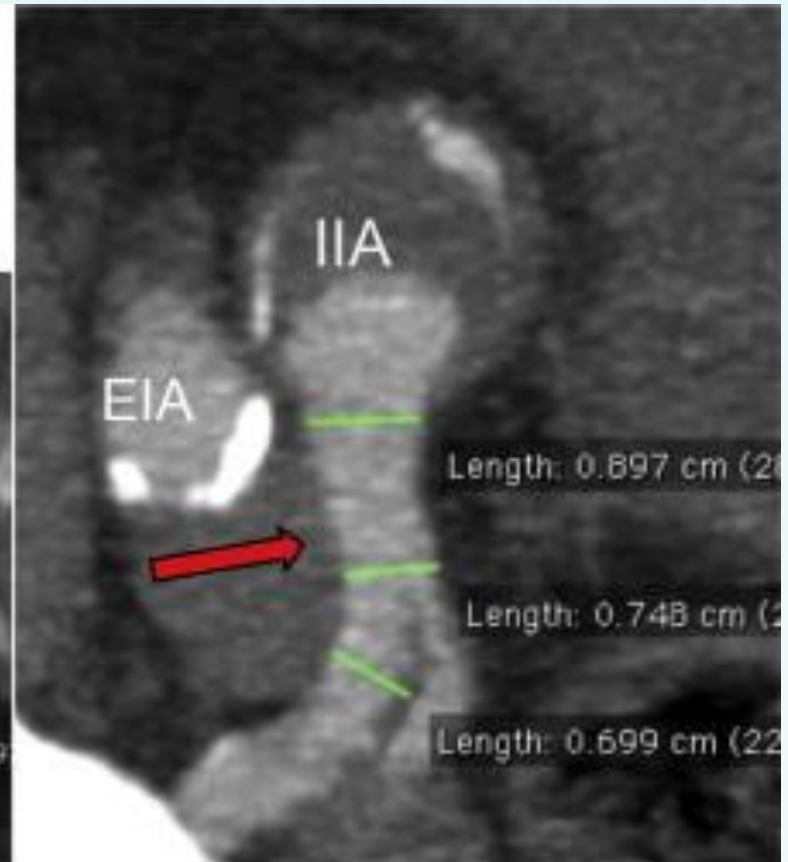
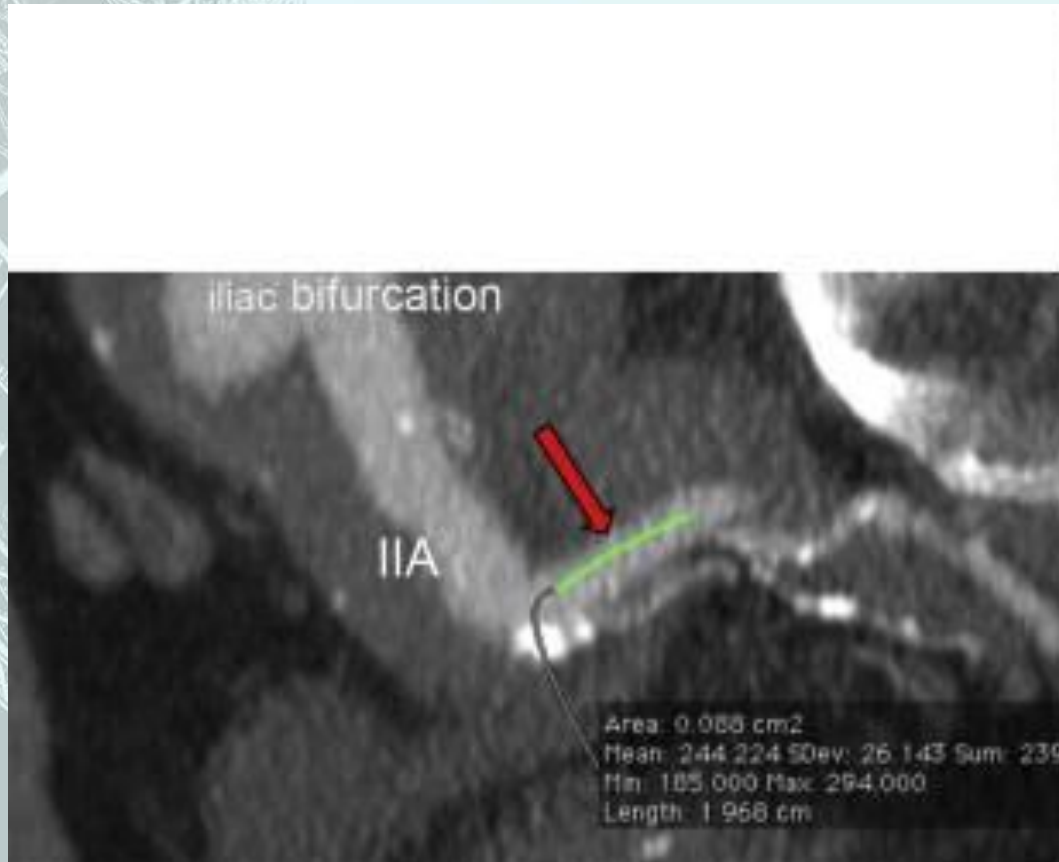
# Iliac side arm (all ePTFE)

## ZBIS, E-iliac

- Eventus
- Advanta V12
- Lifestream
- BeGraft
- Viabahn

## Excluder

- Viabahn



European Journal of Vascular and Endovascular Surgery, Volume 49, Issue 3, 2015, 283–288

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



# Landing zone of the internal iliac artery is most limiting

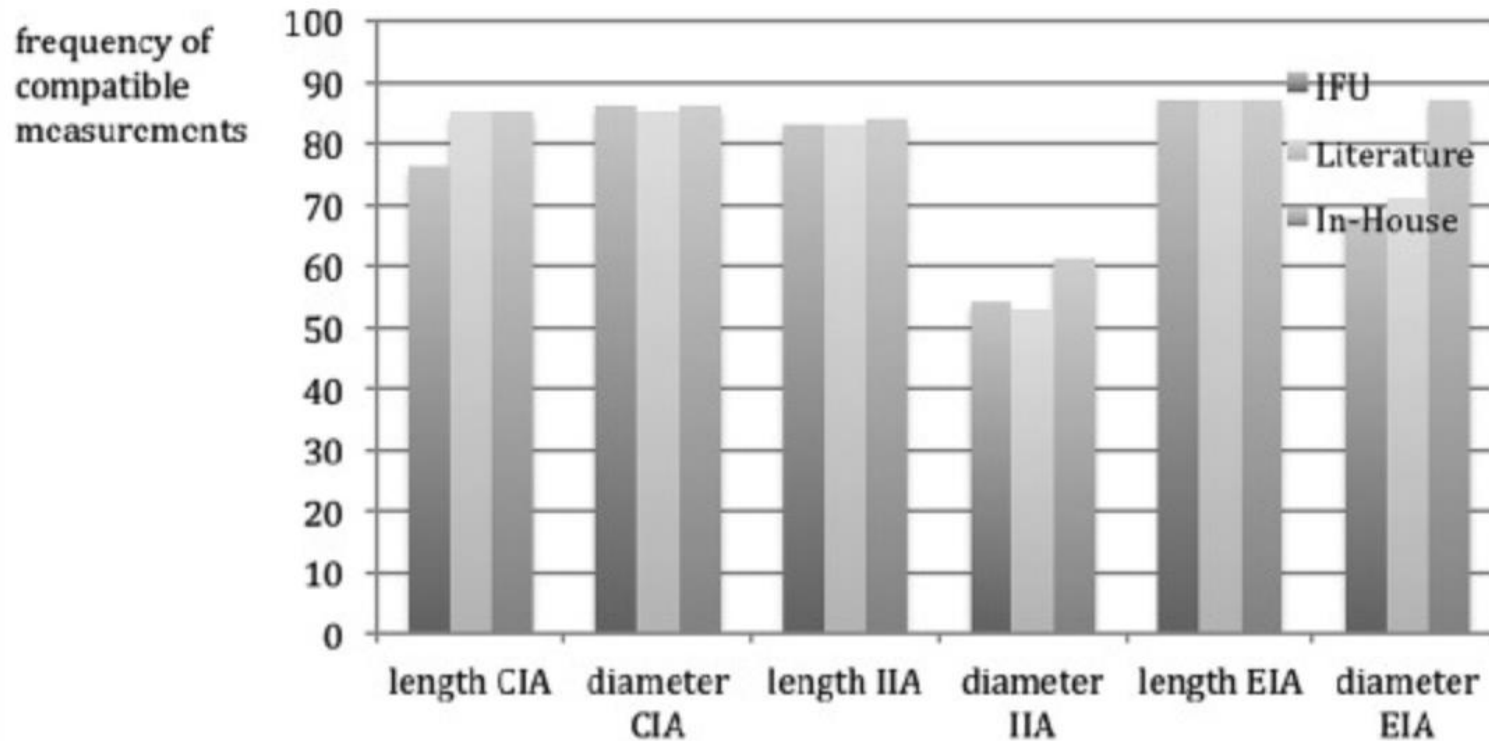


Figure 1.

Results of morphological analysis. *Note.* IFU = instructions for use; CIA = common iliac artery; IIA = internal iliac artery; EIA = external iliac artery.

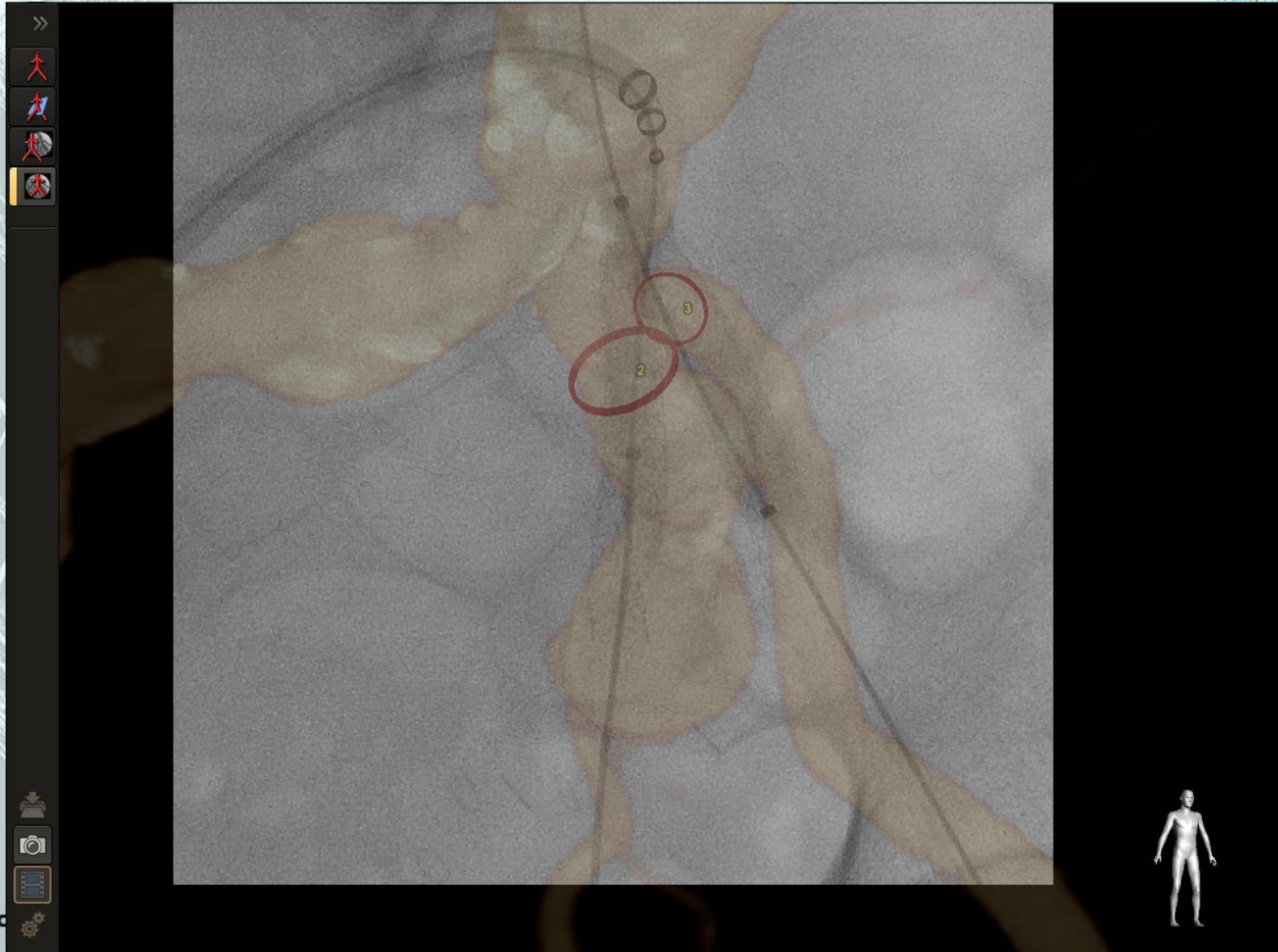


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# Iliac Side-Branch







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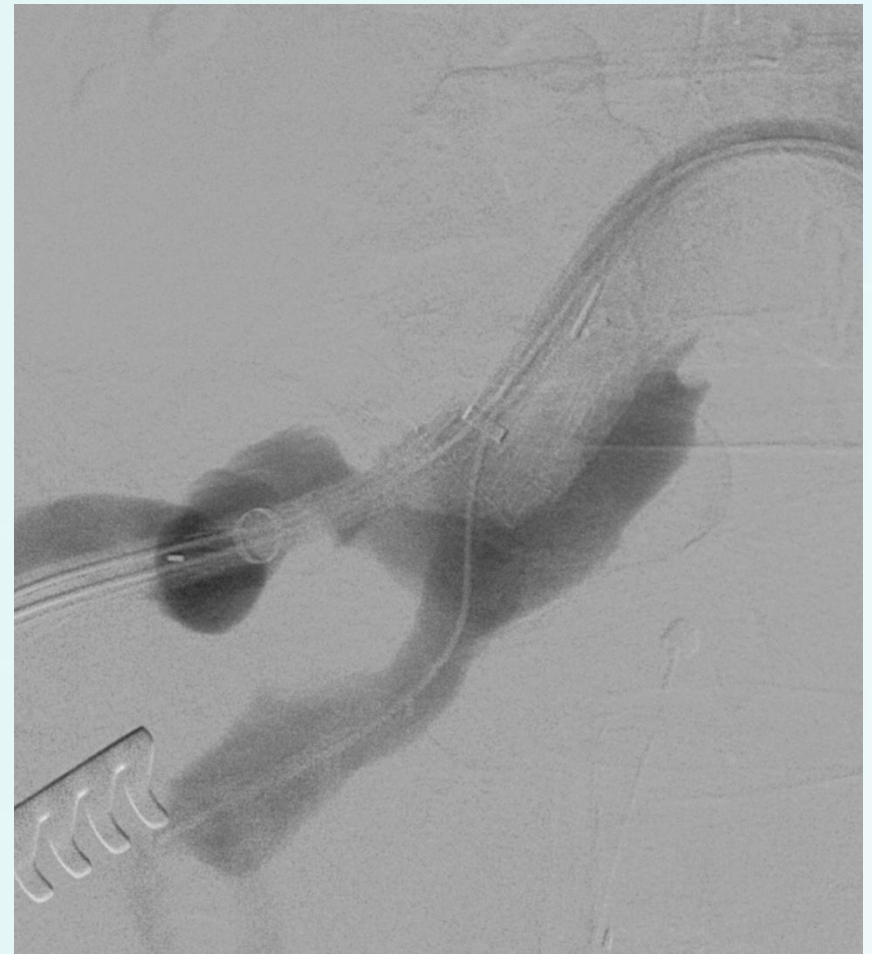
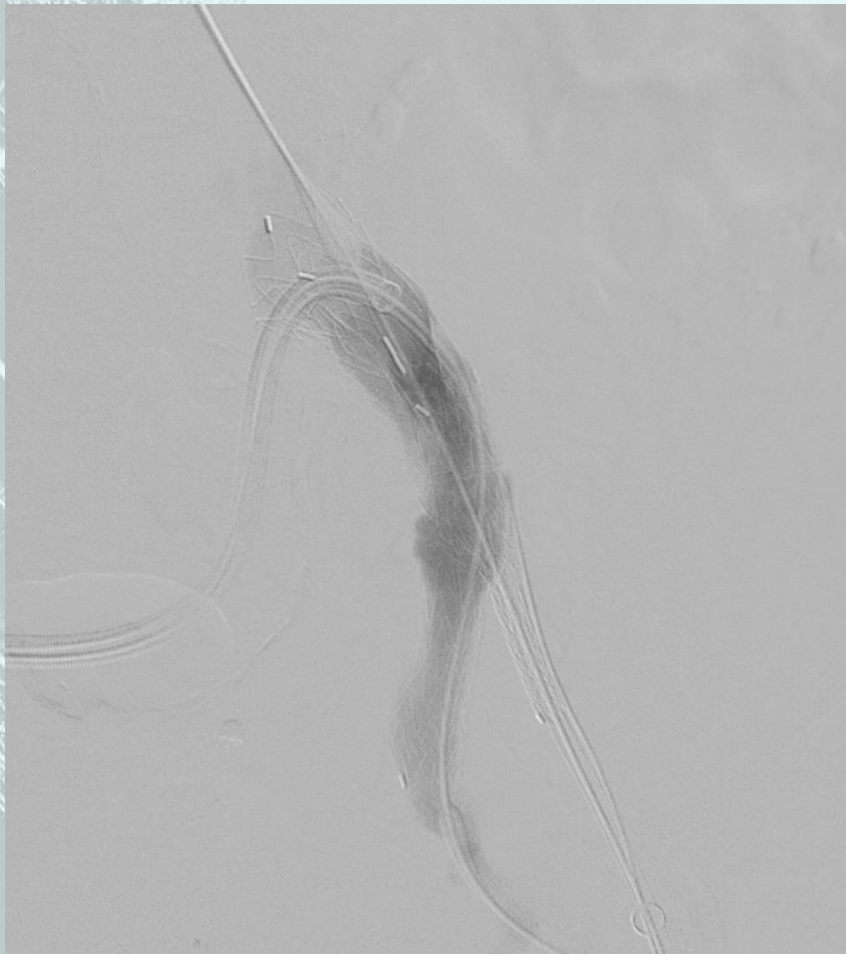
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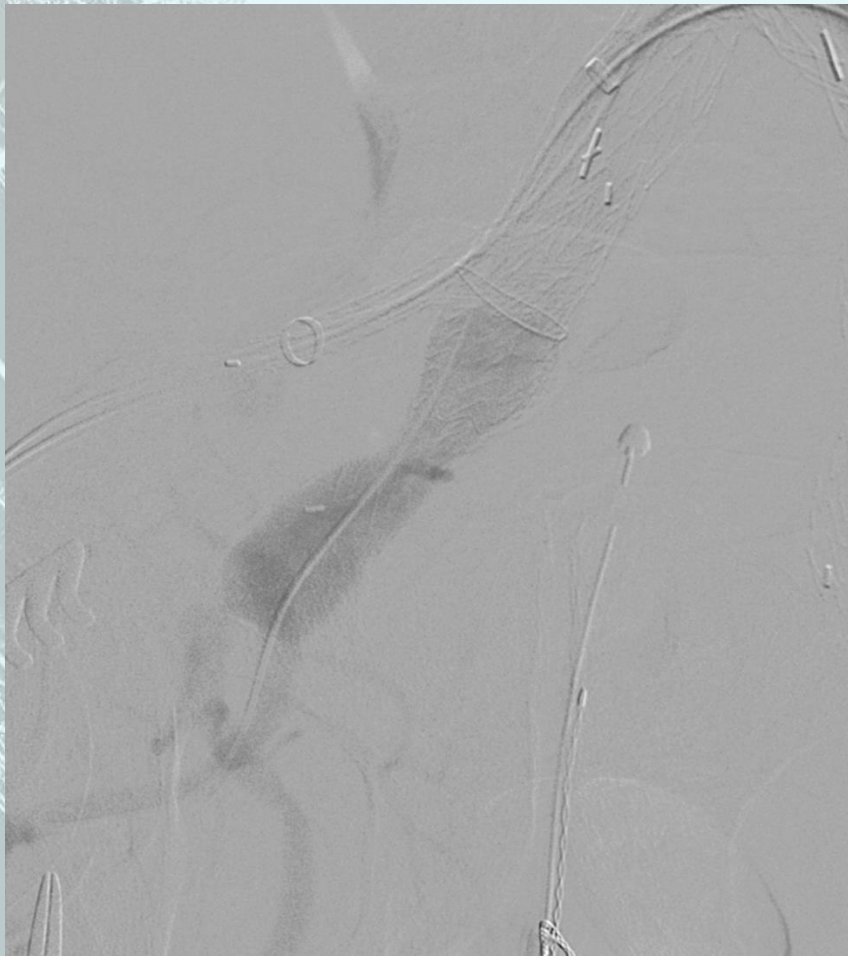
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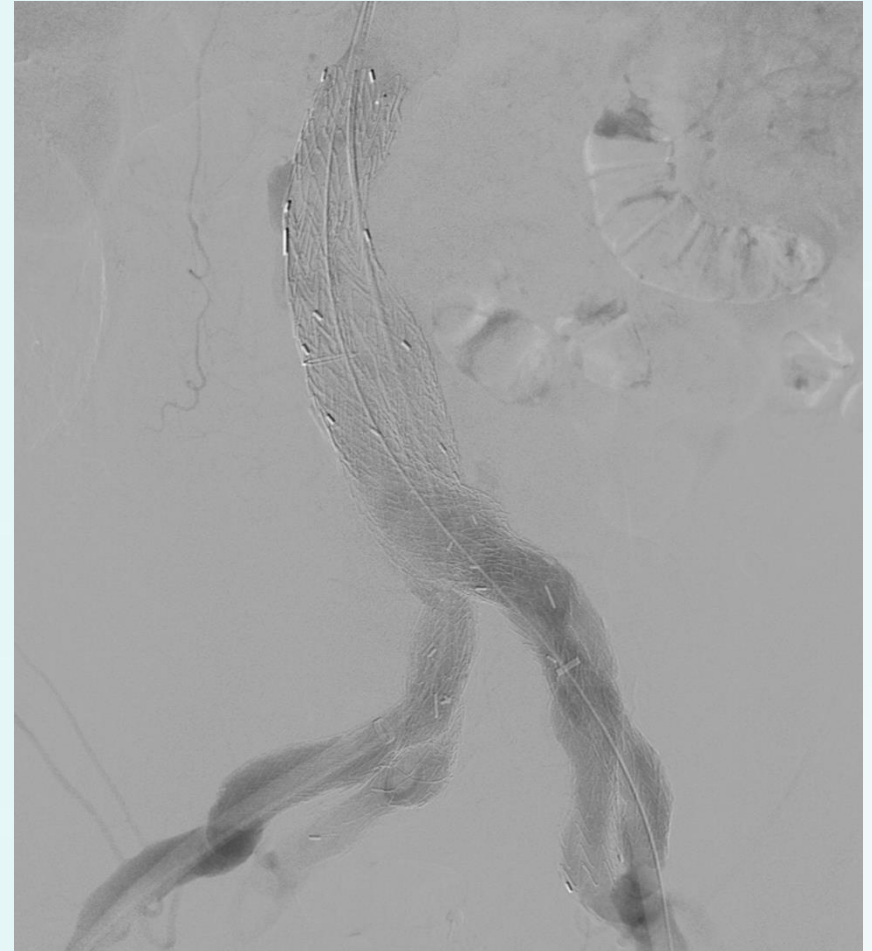
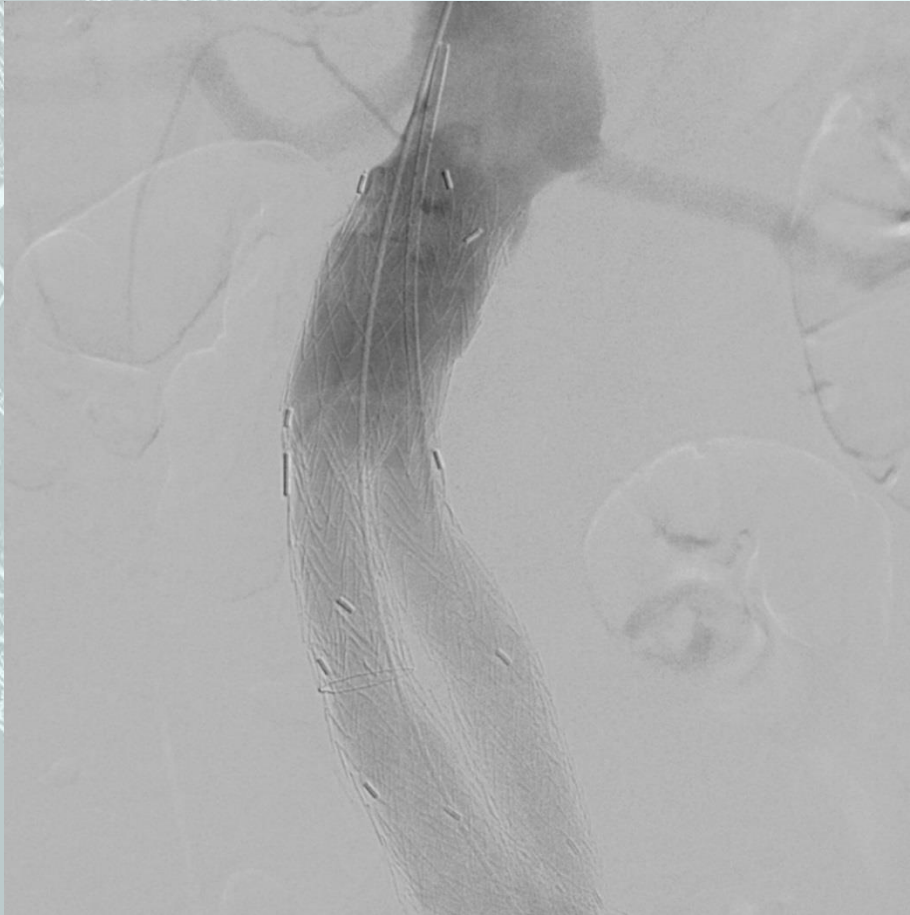
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# Completion Angio



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# A multicenter 12-month experience with a new iliac side-branched device for revascularization of hypogastric arteries

Presented at the International Fast Talk session at the 2016 Vascular Annual Meeting of the Society for Vascular Surgery, National Harbor, Md, June 8-11, 2016.

[Spyridon N. Mylonas](#), MD  , [Gerhard Rümenapf](#), MD, PhD, [Hubert Schelzig](#), MD, PhD, [Jörg Heckenkamp](#), MD, PhD, [Marwan Youssef](#), MD, [Jost Philipp Schäfer](#), MD, PhD, [Wael Ahmad](#), MD, [Jan Sigge Brunkwall](#), MD, PhD on behalf of the  [E-iliac Collaborative Group](#)

\* Members of the E-iliac Collaborative Group are listed in the Appendix (online only).

From the Society for Vascular Surgery



## Results

Male gender	69/70 ( 98.6%)
Mean age (yrs)	72.4 ±9.8
• Iliac aneurysm	66
• Para-anastomotic aneurysm after aorto-biiliac reconstruction	2
• Type Ib endoleak after EVAR	2
IIA aneurysm (>20mm) (n)	6



## Results

Measurements	mm (median, IQR)
CIA Ø	34 (17-56)
CIA L	65 (23-129)





## Results

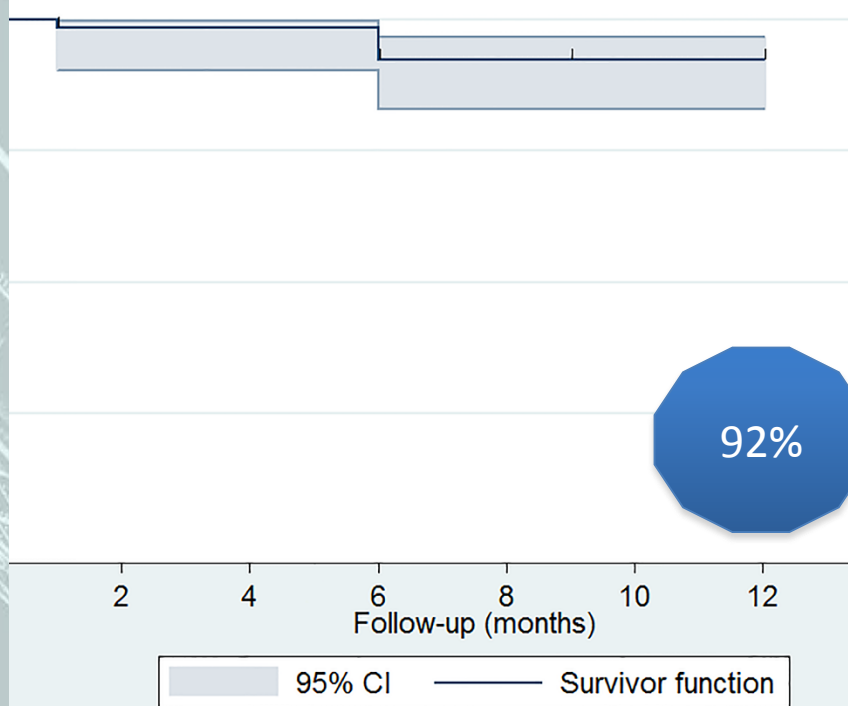
- 70 patients
- 82 IIA:s revascularized
  - **12 simultaneously bilateral**
- Technical success 100% (82/82)
- 1 perioperative death (1.4%)
- No other clinical complications



# Results

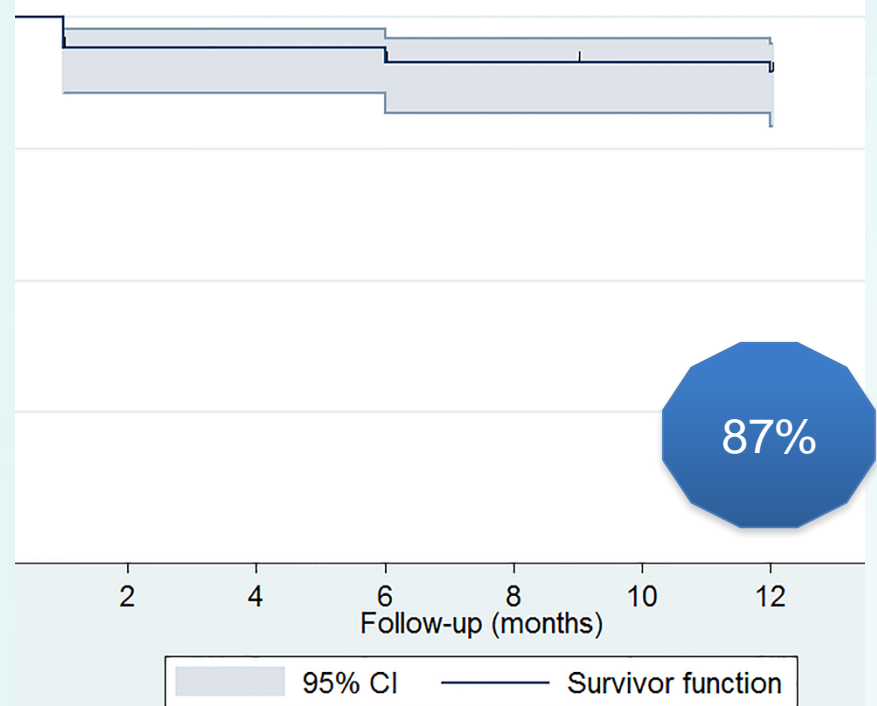
## Occlusion

Kaplan-Meier survival estimate



## Endoleak

Kaplan-Meier survival estimate





# Conclusion

Occlusion of the internal iliac artery leads to buttock claudication in 30%

EVAR with flared limbs has a significantly higher risk for type 1b endoleak at 3 years

IBD for EVAR in patients with CIA >16-18mm?



# Conclusions

The E-liac<sup>®</sup> stent graft system can be safely and effectively applied for the treatment of aorto-iliac aneurysmatic disease

High patency rates

Long-term data are needed to confirm the efficacy of the device.