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

JANUARY 19-21 2017
MARRIOTT RIVE GAUCHE & CONFERENCE CENTER
PARIS, FRANCE

Parallel grafts are the best option for short neck aneurysms and can be standardized

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Disclosure

Speaker name:

Konstantinos Donas..

☐ 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

Münster algorithm for JAAA

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Open N=31	F-EVAR N=29	Chimney N=30
• Fit for surgery • Relevant accesory • Renal artery	•High risk patient •> 2 aortic branches •Time (6-8 weeks)	• High risk patient • ≤ 2 aortic branches • Symptomatic excentiric JAAA • Iliac calfication/angulation

2008-2010

Donas KP et al. J Vasc Surg 2012;56:285-90

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Why are parallel grafts are the best option for short neck aneurysms and can be standardized ?

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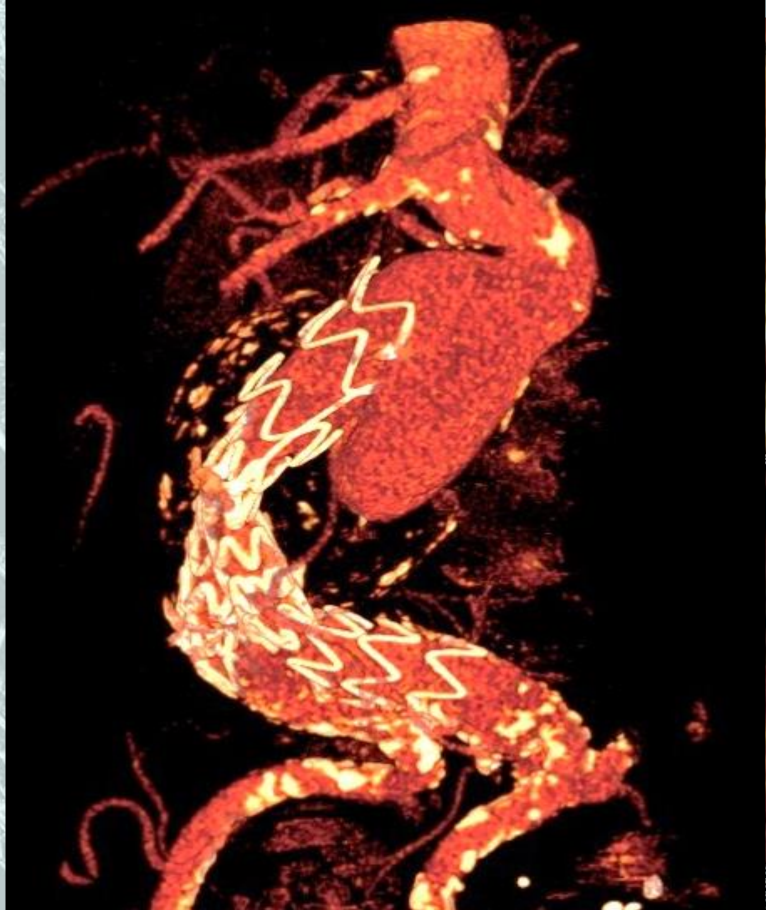
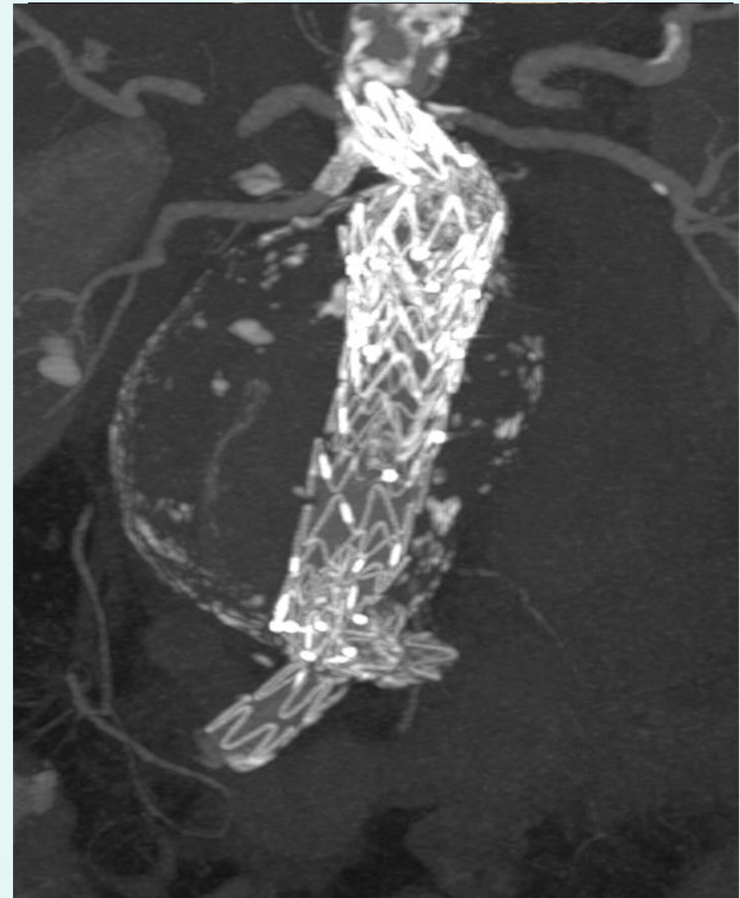
- 1. Treatment of symptomatic or ruptured pathologies with short neck

- Use of off-the-shelf devices, 24h per day available, no need to order and customized the device

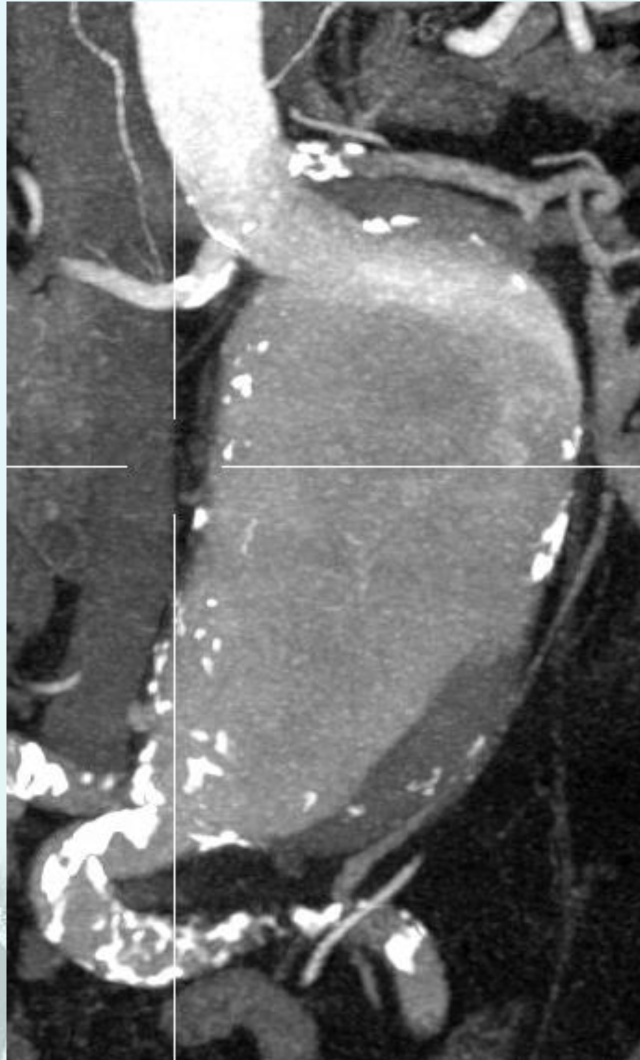
Symptomatic/ruptured cases

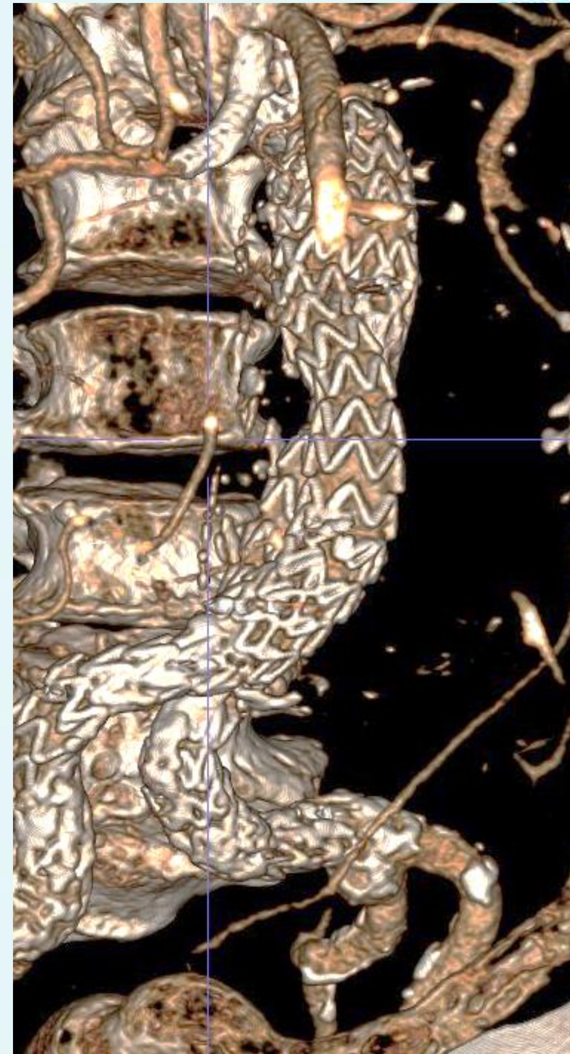



- **2. Overcoming of anatomical obstacles such as angulated neck or calcified and stenosed iliac arteries**

- **Use of low profile abdominal devices with flexible delivery systems and nitinol endoskeleton**

Angulated short neck





- **Angulated neck, migrated endograft and stenosed renal arteries**

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St. Franziskus Hospital Münster
SOMATOM Definition AS+

A

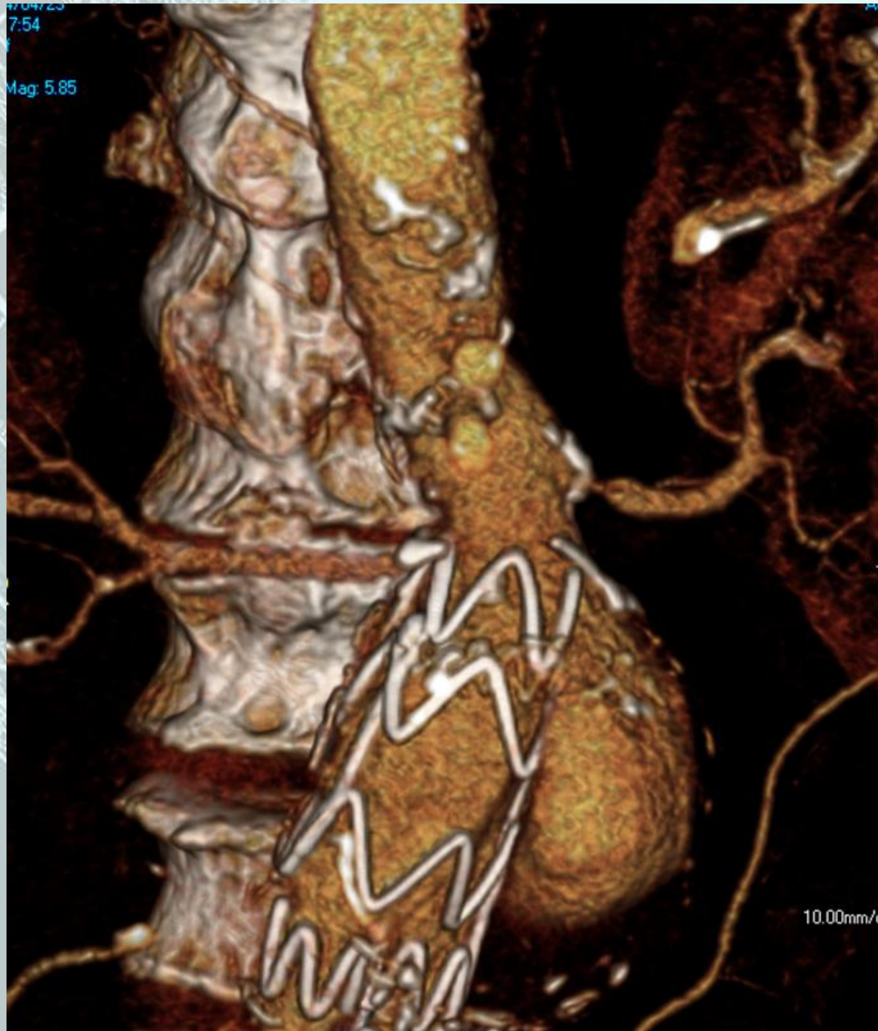
R

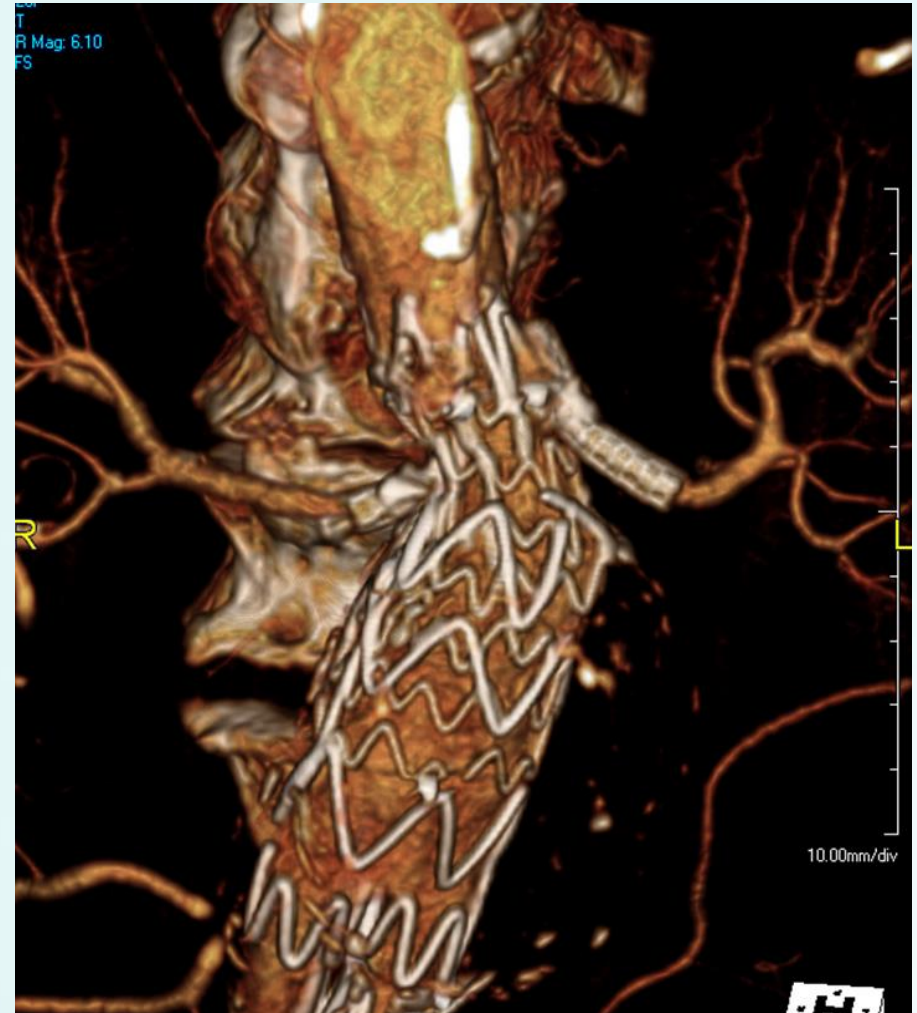
L

P

Alter:85 M
04/23/2014 10:16 AM
nativ
Flow = 4ml /sec

120 kV
304 mA
W:700 L:60


7:54
Mag: 5.85
10.00mm/d


R Mag: 6.10
FS
R
L
10.00mm/div

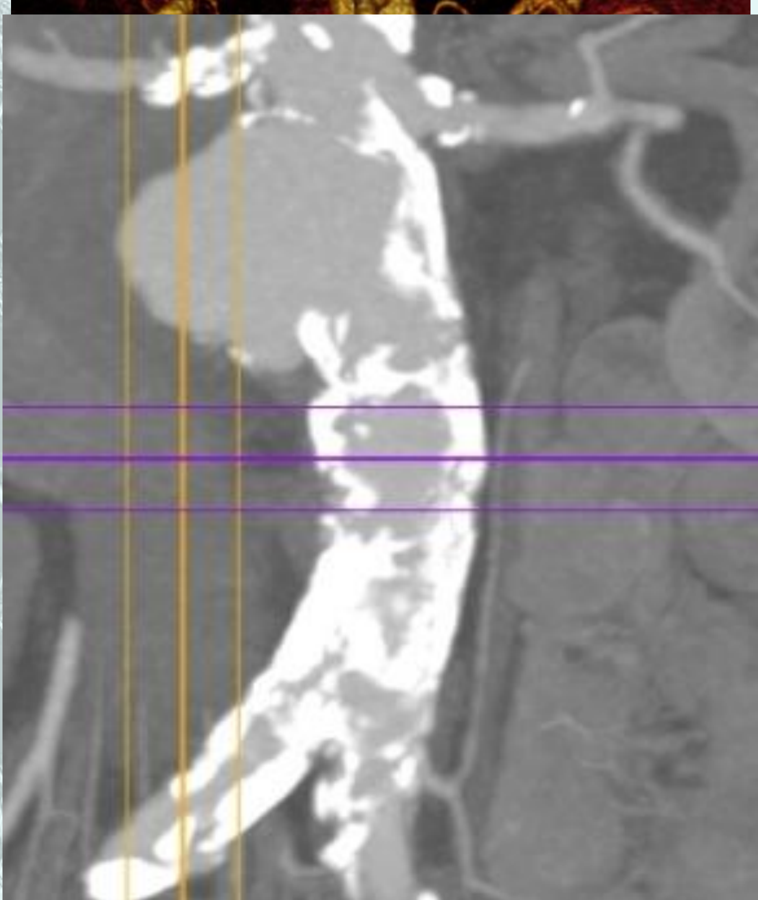
Stent struts at the origin of the renals

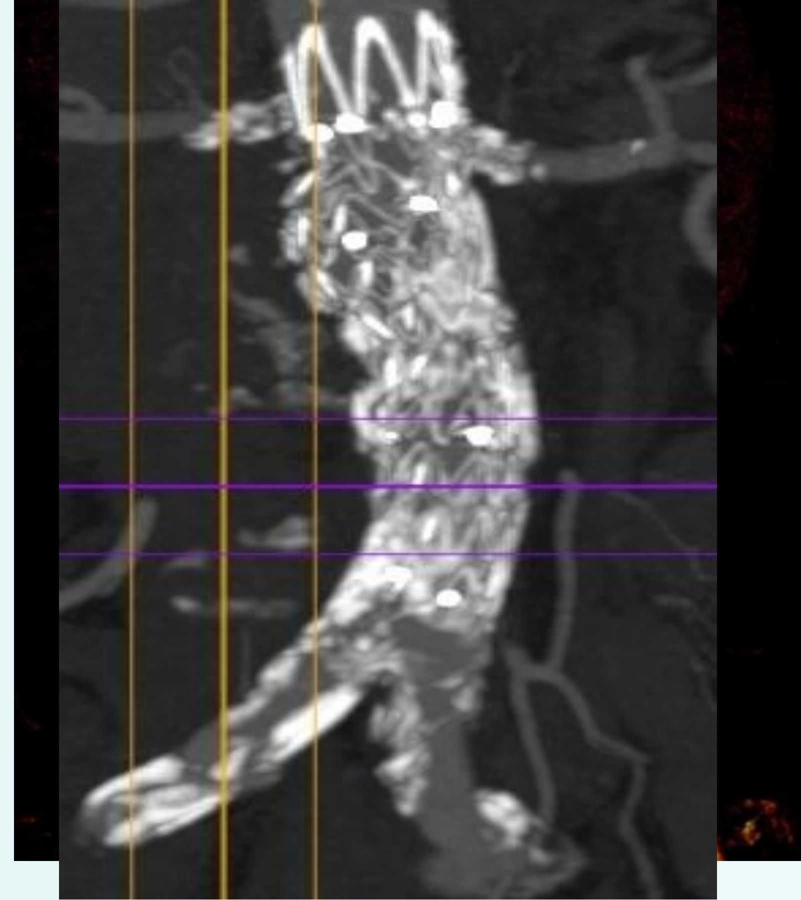
Fenestrated Stent-Grafts for Sal... ...minal Aneurysm Repair

A. Katsarg... ...G. Verhoeven [a,b,*]
[a] Department ... ...many
[b] Department ... ...gium
[c] Department o... ...niversity Medical Center Groningen, University of Groningen, The Netherlands

23.1% of the cases advance of catheter or guiding-sheath through the fenestrations was **„tedious"** due to the suprarenal stent-struts

Iliac tortuosity/calcification





- 3. Cost-effectiveness

Cost-effectivess

˜16.000 euro/pat.

- 4. Increasing evidence in the literature

Evidence in the literature

Table 1. Early outcome of visceral chimney grafts.

Authors	No. of patients	No. of CGs	Elective/urgent repair	Early patency, no. (%)	Early EL-I, no. (%)	30 day M, no. (%)	Procedure related complications, no. (%)
Larzon et al. 2008	13	15	7/6	14 (100)	1 (8)	0	0
Hiramoto et al. 2009	8	8	8/0	8 (100)	1 (13)	0	1?
Moulakakis et al. 2012	3	4	2/1	4 (100)	1 (33)	0	0
Zhang et al. 2012	31	45	45/0	45 (100)	5 (16)	0	0
Donas et al. 2013	40	73	36/4	71 (98)	3 (8)	0?	0?
Fukui et al. 2013	10	10	10/0	10 (100)	0 (0)	[illegible]	0?
Lachat et al. 2013	77	169	68/9	165 (98)	[illegible]	[illegible]	7
Schiro et al. 2013	9	9	0/9	[illegible]	[illegible]	[illegible]	0
Tolenaar et al. 2013	13	22	[illegible]	[illegible]	[illegible]	[illegible]	1?
Banno et al. 2014	38	[illegible]	[illegible]	[illegible]	[illegible]	3	18
Ducasse et al. 2014	[illegible]	[illegible]	[illegible]	[illegible]	1 (5)	1	4
Igari et al. 2014	[illegible]	[illegible]	[illegible]	8(100)	0	0	0
Lee et al. 2014	[illegible]	[illegible]	[illegible]	84 (100)	3 (7)	2	0?
Scali et al. 2014	[illegible]	[illegible]	38/3	73 (96)	1 (2)	2	5?
Schwierz et al. 2014	32	104	18/14	94 (90)	5 (16)	3	1?
XiaoHui et al. 2015	42	56	42/0	56 (100)	8 (19)	0	1?
Bin Jabr et al. in press	51	73	20/31	70 (96)	5 (10)	5	2
Different case reports (see electronic supplementary material)	38	73	26/12	73 (100)	8 (21)	2	2
Overall	517	911	435/96	885 (97%)	67 (13%)	19 (4%)	42 (8%)

517 patients treated in 17 different vascular centers

Evidence in the literature

Collected World Experience About the Performance of the Snorkel/Chimney Endovascular Technique in the Treatment of Complex Aortic Pathologies

The PERICLES R...

Konstantinos P. Donas, MD ... MD, PhD,§ ...igators

517 patients from 13 US and European University centers

... experience with ... ysm repair (EVAR) for complex ...

... EVAR has largely replaced open surgery worldwide for anatomically suitable aortic aneurysms. Lack of availability of fenestrated and branched devices has encouraged an alternative strategy utilizing parallel or snorkel/chimney grafts (ch-EVAR).

Methods: Clinical and radiographic information was retrospectively reviewed and analyzed on 517 patients treated by ch-EVAR from 2008 from 2014 by prearranged defined and documented protocols.

Results: A total of 119 patients in US centers and 398 in European centers were treated during the study period. US centers preferentially used Zenith stent-grafts (54.2%) and European centers Endurant stent-grafts (62.2%) for the main body component. Overall 898 chimney grafts (49.2% balloon expandable, 39.6% self-expanding covered stents, and 11.2% balloon expand-

primary patency was 94%, with secondary patency of 95.3%. Overall survival of patients in this high-risk cohort for open repair at latest follow-up was 79%.

Conclusions: This global experience represents the largest series in the ch-EVAR literature and demonstrates comparable outcomes to those in published reports of branched/fenestrated devices, suggesting the appropriateness of broader applicability and the need for continued careful surveillance. These results support ch-EVAR as a valid off-the-shelf and immediately available alternative in the treatment of complex abdominal EVAR and provide impetus for the standardization of these techniques in the future.

Keywords: abdominal aortic aneurysm, endovascular, fenestrated, thoracoabdominal, vascular

(*Ann Surg* 2015;00:1–8)

In summary, parallel grafts (chimney EVAR)

- Treatment of **symptomatic/ruptured** cases
- Treatment of anatomically **unsuitable** patients for fenestrated endografting
- **Cost-effective**
- Increasing evidence in the literature including more than **1000** patiens shows **reproducible**
- **results** in several European and US vascular centers