

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

JANUARY 19-21 2017

MARRIOTT RIVE GAUCHE & CONFERENCE CENTER

PARIS, FRANCE



Long term results of the chimney in the arch

Thomas Larzon, MD, PhD

Dep of Cardiothoracic and Vascular Surgery

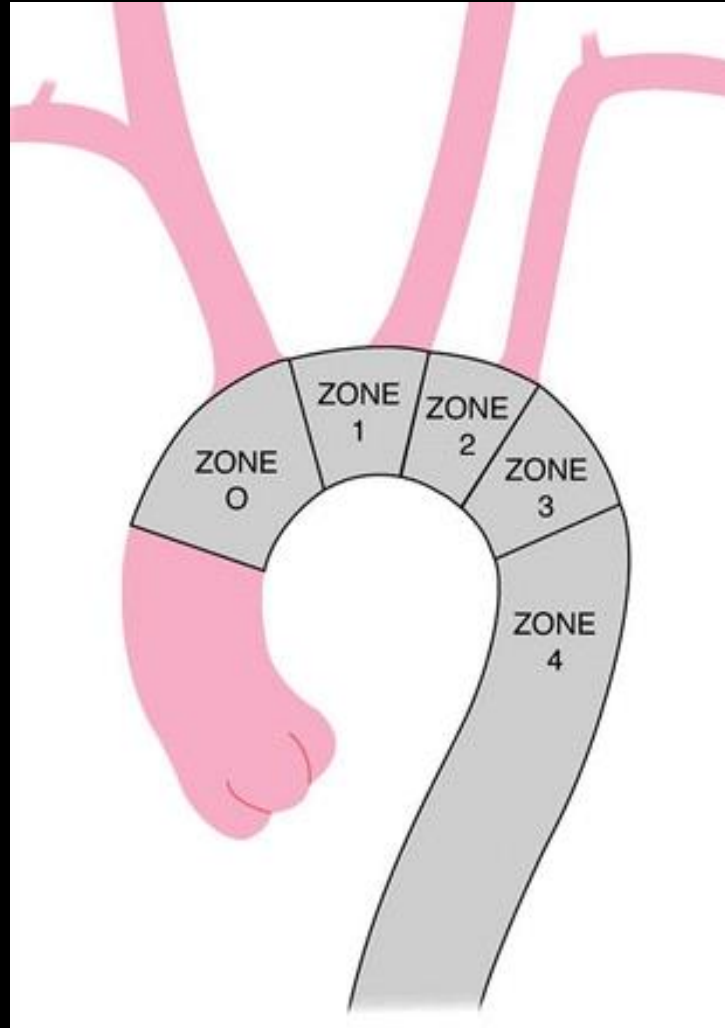
Örebro University Hospital, Sweden

Disclosures

I have the following potential conflicts of interest to report:

Educational Program	W.L Gore & Associates
Co-founder	Meliora-Vision
Co-founder	M-V Arterica

Extension to zone 0-1-2



Zone 2

Contrast: VISIPAQUE320/mgl
Pos: FFS
Aorta SP + 35s
FoV: 360 mm
FoV: 360 mm

C: 127,5, W: 255,0

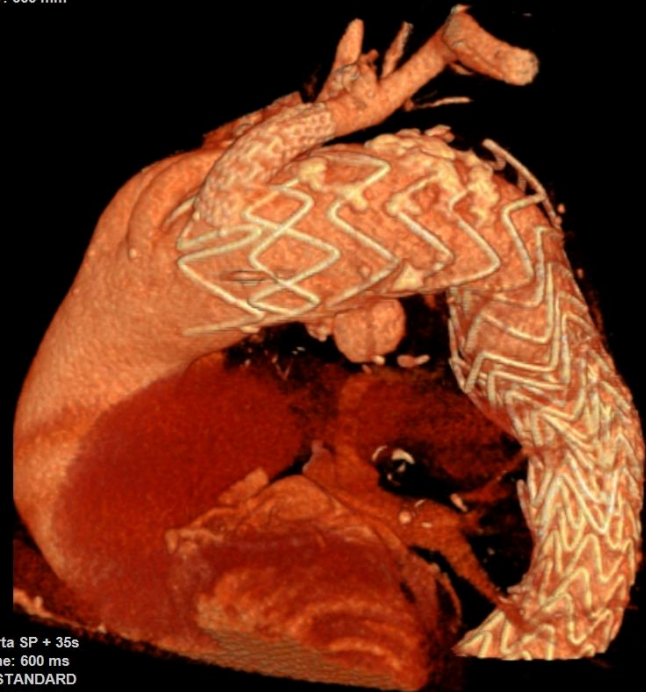



Aorta SP + 35s
Time: 600 ms
F: STANDARD
100 kV 2 mAs
Bild 19 av 24
13010731 Malarsjukhuset Rad avd, ESKILSTUNA
2011-03-23, 13:17:23 A

13

Contrast: VISIPAQUE320/mgl
Pos: FFS
Aorta SP + 35s
FoV: 360 mm
FoV: 360 mm

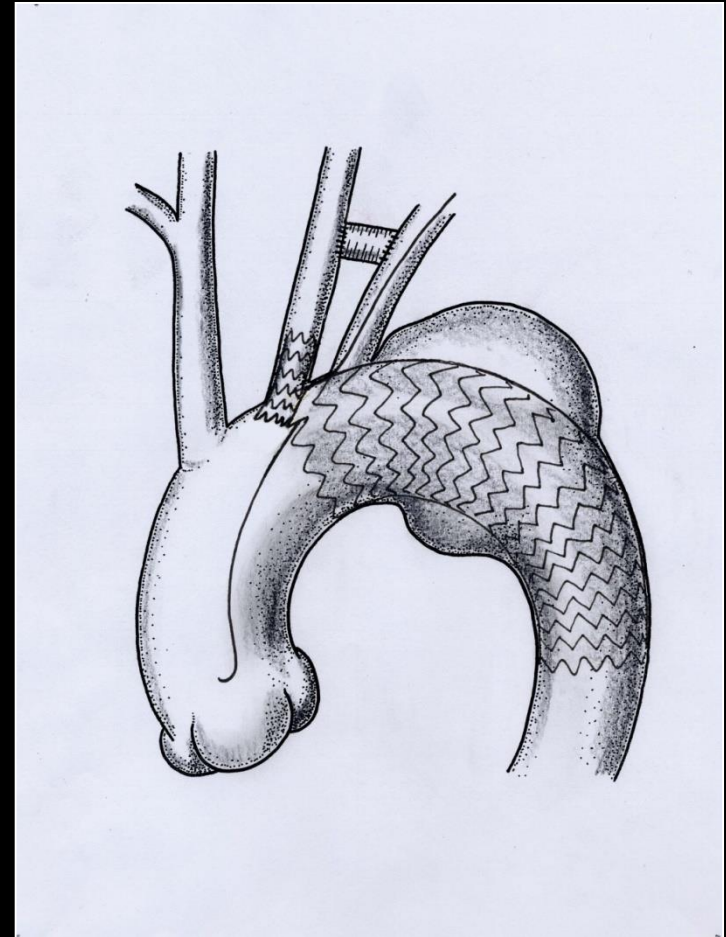
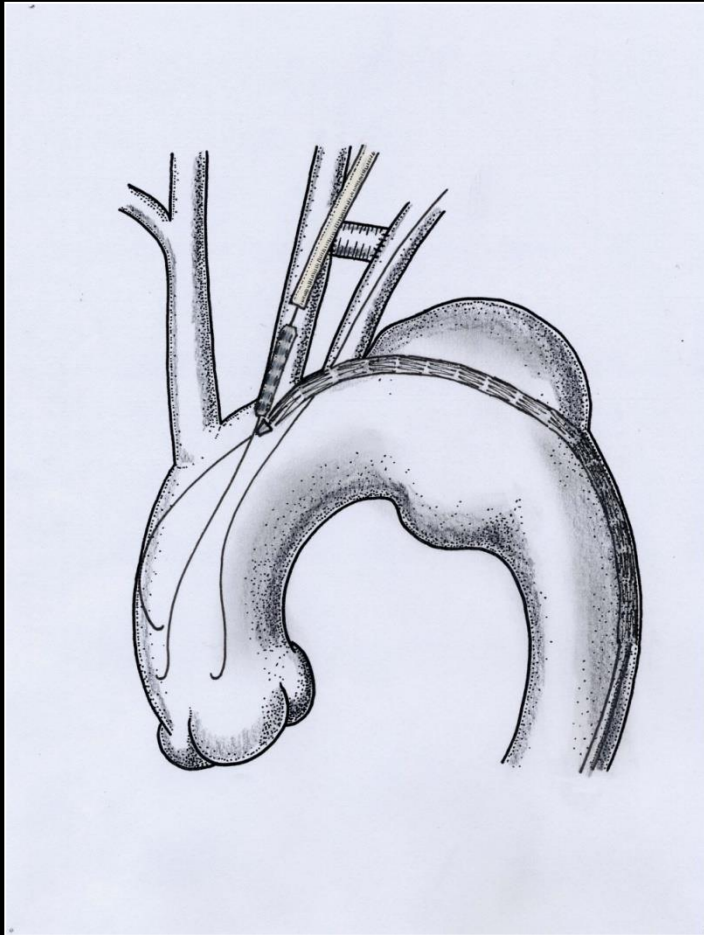
C: 127,5, W: 255,0

Aorta SP + 35s
Time: 600 ms
F: STANDARD
100 kV 2 mAs
Bild 15 av 24
13010731 Malarsjukhuset Rad avd, ESKILSTUNA
2011-03-23, 13:17:23 F

13

Zone 1

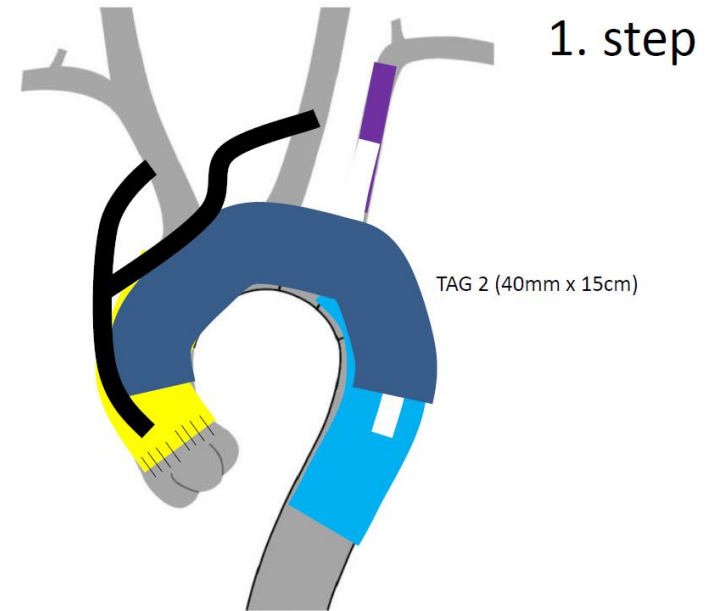
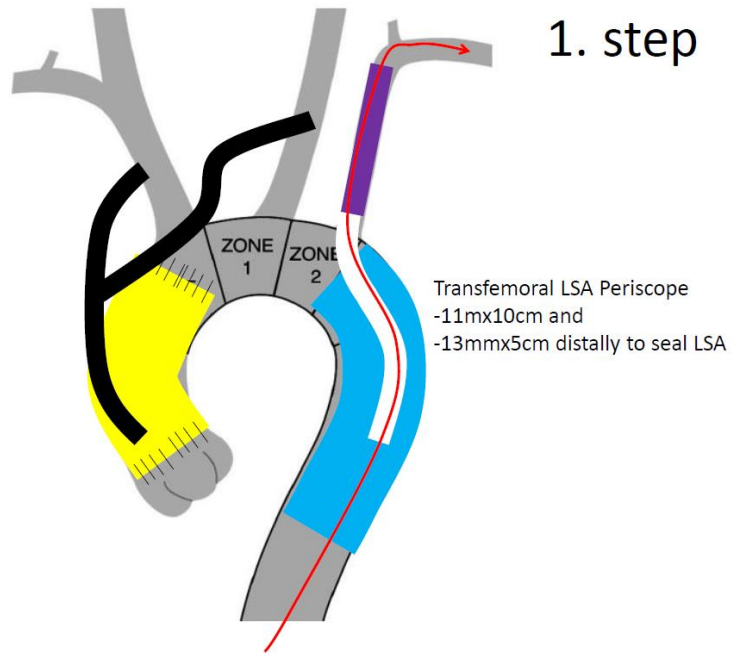


Larzon T et al. *Eur J Vasc Endovasc Surg.* 2005;30:147-151

Zone 0

Periscope by Lachat

Sandwich by Lobato



Courtesy: Mario Lachat

REVIEW

Chimney Grafts in Aortic Stent Grafting: Hazardous or Useful Technique? Systematic Review of Current Data

B. Lindblad^{*}, A. Bin Jabr, J. Holst, M. Malina

Department of Vascular Diseases, Skåne University Hospital, Malmö, Sweden

WHAT THIS PAPER ADDS

A chimney stent graft preserves vital aortic branches in aortic endovascular repair. The so called gutter endoleak causing a type I endoleak has been a potential burden. There are excellent reviews on this topic; however, during the last year the case series have been several fold larger, including over 800 patients, and with a longer follow up. Whether urgent or semi-urgent patients, not fit for open surgery and unsuitable for fenestrated or branched stent grafts, should be offered this chimney technique is an important question. What can be learned from this increased knowledge? Is the chimney stent graft technique really useful or hazardous?

Table 4. Follow up of thoracic CGs.

Authors	No. pat.	FU ms	M	LRM	Late CG Patency	CRI	Late complications
Criado 2007	8	21?	0	0	8 (100)	0	0
Baldwin et al. 2008	7	12	2	1	7 (100)	0	
Larzon et al. 2008	14	17	4	2	6 (100)	3	EL-II 2 pat.
Gehringhoff et al. 2011	8	15	2	1	7 (100)	0	0?
Shu et al. 2011	12	12	0	0	8 (100)	0	0
Vallejo et al. 2012	8	28?	0?	0?	8 (100)	0?	0?
Fukui et al. 2013	9	10	1?	1	11 (100)	0?	0?
Lachat et al. 2013	14	26	0?	0?	13 (93)	0	0
Shahverdyan et al. 2013	6	3	1	1	9 (90)	0	2 late EL-I, 1 late SCI
Zhu et al. 2013	34	16	2	0	34 (100)	0	0
Kurazumi et al. 2014	3	47	0?	0	9 (100)?	0	0?
Mangialardi et al. 2014	26	37	5	2	25 (89)	1	0
Mehta et al. 2014	5	6	1	1	12 (100)	0	0
O'Callaghan et al. 2014	18	22	?	3	15 (100)	5 (2D)	0
Xue et al. 2014	59	17	3	3	53 (90)	0	5 late EL-I
De Rango et al. 2015	4	23	?	1	7 (100)?	0	2 EL-I, fatal
Bin Jabr et al. 2015	22	24	15	6	24 (100)	0	3 late EL-I conversion,
Liu et al. 2015	43	17	0	0	43 (100)	0?	0
Case presentations	23	1–18	0	0	37 (100)	0	1 TEVAR elongation
Overall	314		34	22	339 (97%)	9 (2D)	

Note. Percentage in parenthesis. Duplicate series from the same institution excluded. FU = follow up; CGs = chimney and periscope grafts); M = mortality; LRM = lesion related mortality; ms = months; CRI = chronic renal impairment; D = dialysis; EL-I = type I endoleak; EL-II = type II endoleak; SCI = spinal cord ischemia; ? = uncertain data.

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34% 22%

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97%

◆ CLINICAL INVESTIGATION

Chimney Technique for Aortic Arch Pathologies: An 11-Year Single-Center Experience

**Nicola Mangialardi, MD; Eugenia Serrao, MD; Holta Kasemi, MD; Vittorio Alberti, MD;
Stefano Fazzini, MD; and Sonia Ronchey, MD, PhD**

Department of Vascular Surgery, San Filippo Neri Hospital, Rome, Italy.

Mangialardi et al

From June 2002 to May 2013, 26 patients

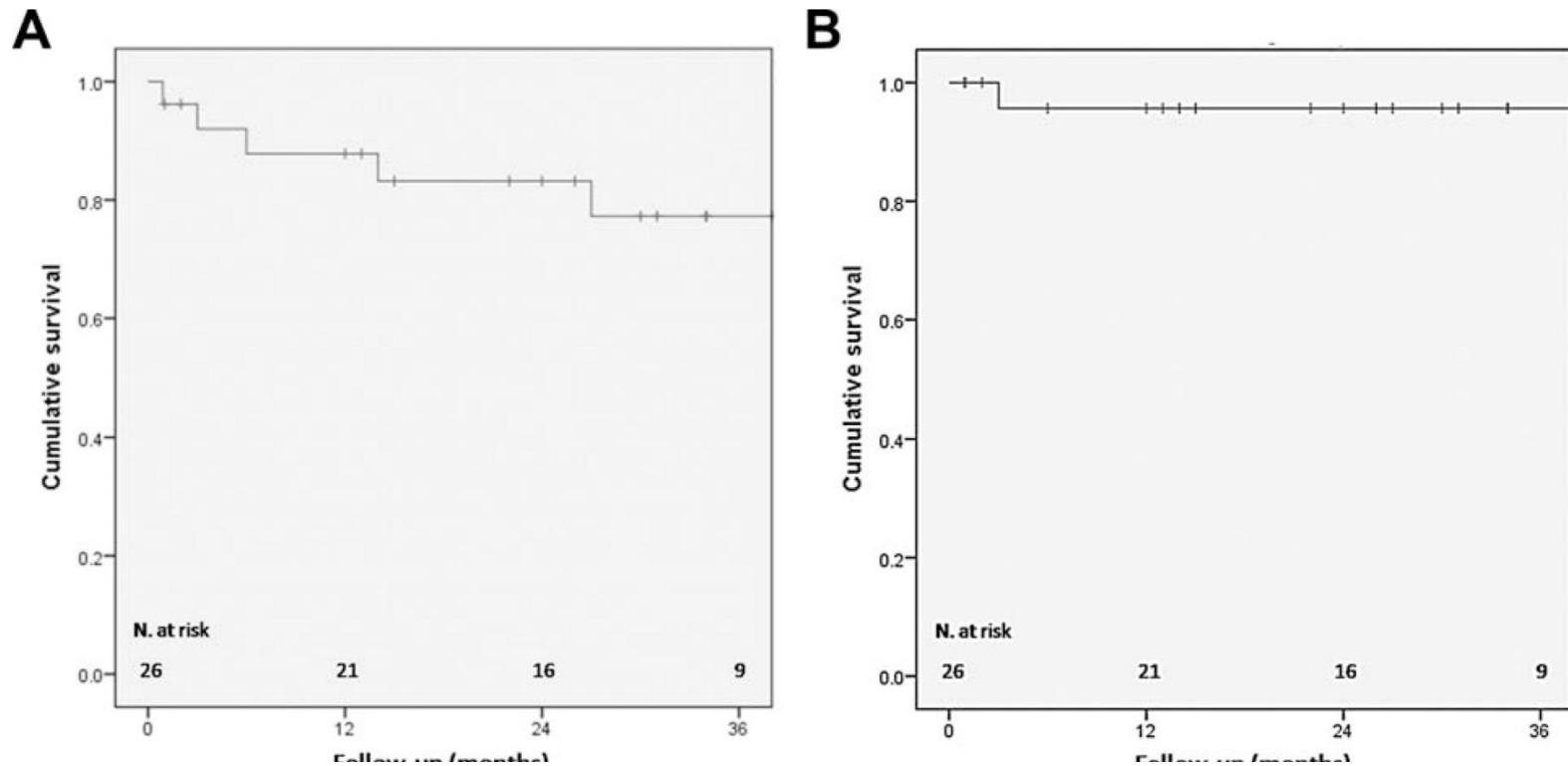


Figure 3 ♦ Kaplan-Meier estimates of (A) overall survival and (B) freedom from aneurysm-related death. The + indicates censored data. The standard did not exceed 10% at 34 months.

”The rate of EL-I is ”acceptable”,
lesion related mortality seems low and
patency of CGs is surprisingly low”

”useful technique for emergent cases
but highly restrictive use is
recommended for selective elective
cases until more data exists”

Chimney cases 2004 – 2015 in Örebro, Sweden

Indication	Elective	Acute
Aneurysm	13	8
Dissection	10	8
Trauma	0	3
Other	1	3
Total no of pts	24	22

Chimney cases 2004 – 2015 in Örebro, Sweden

Prox landing	Elective	Acute
Zone 2	6	10
Zone 1	17	11
Zone 0	1	1
Total no of pts	24	22

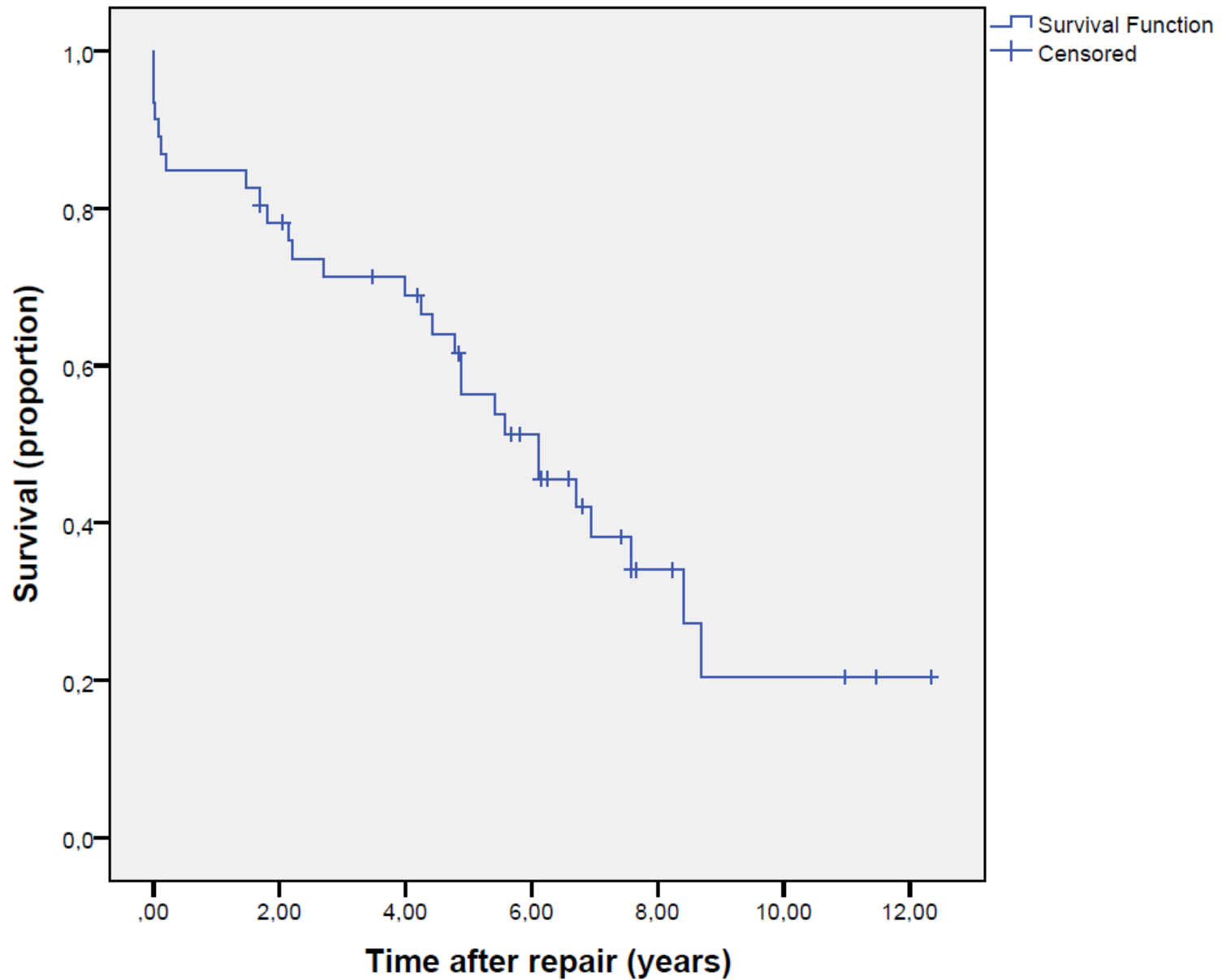
Chimney cases 2004 – 2015 in Örebro, Sweden

Type of procedure	Elective	Acute
1 Chimney	8	14
1 Chimney+BP	15	6
2 Chimneys+BP	1	1
1 Chimney+2BP	0	1
Total no of pts	24	22

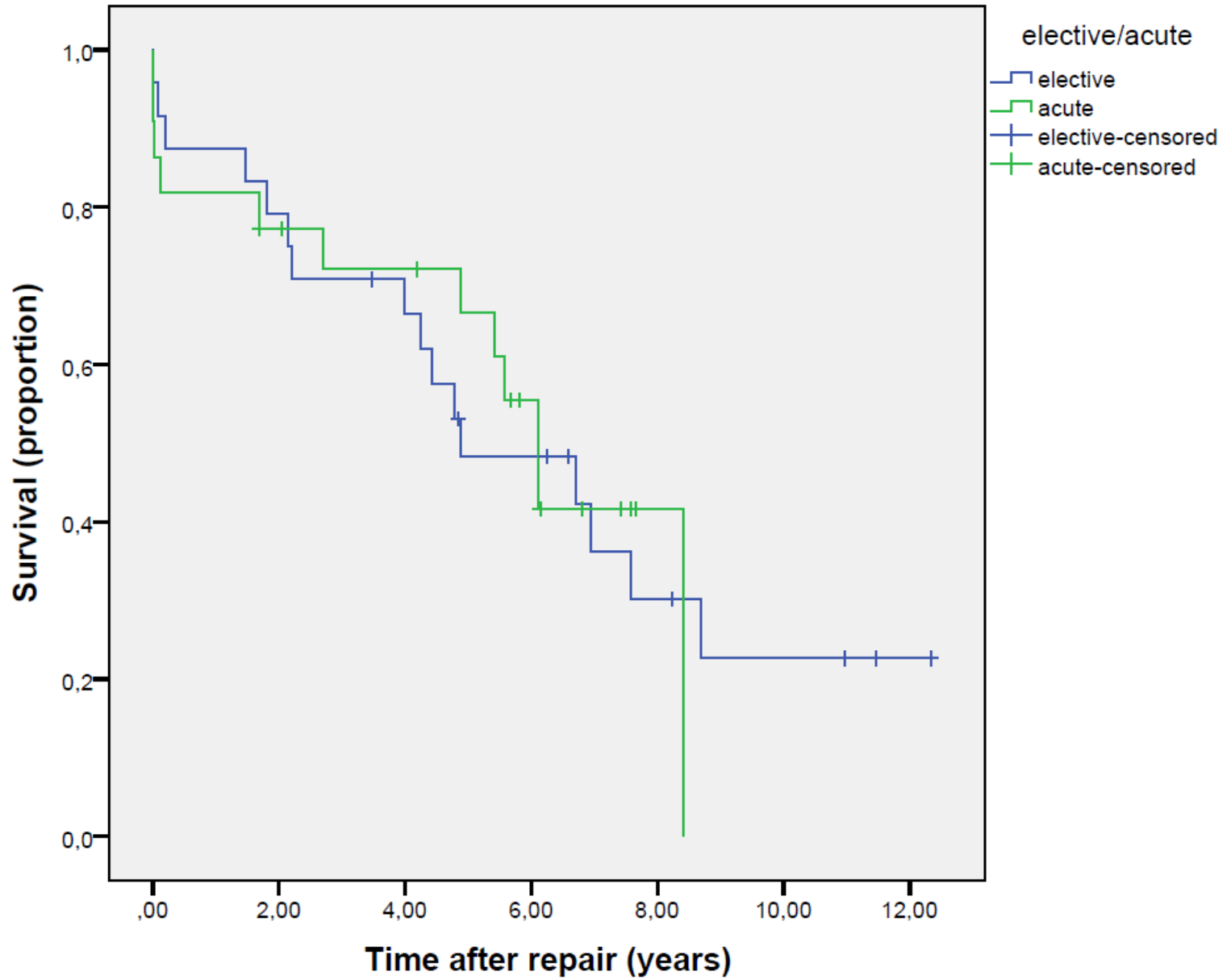
Outcome

- Overall mortality
- Aortic-related mortality
- Time to first reintervention
- Time to composed reintervention and mortality
- Chimney patency

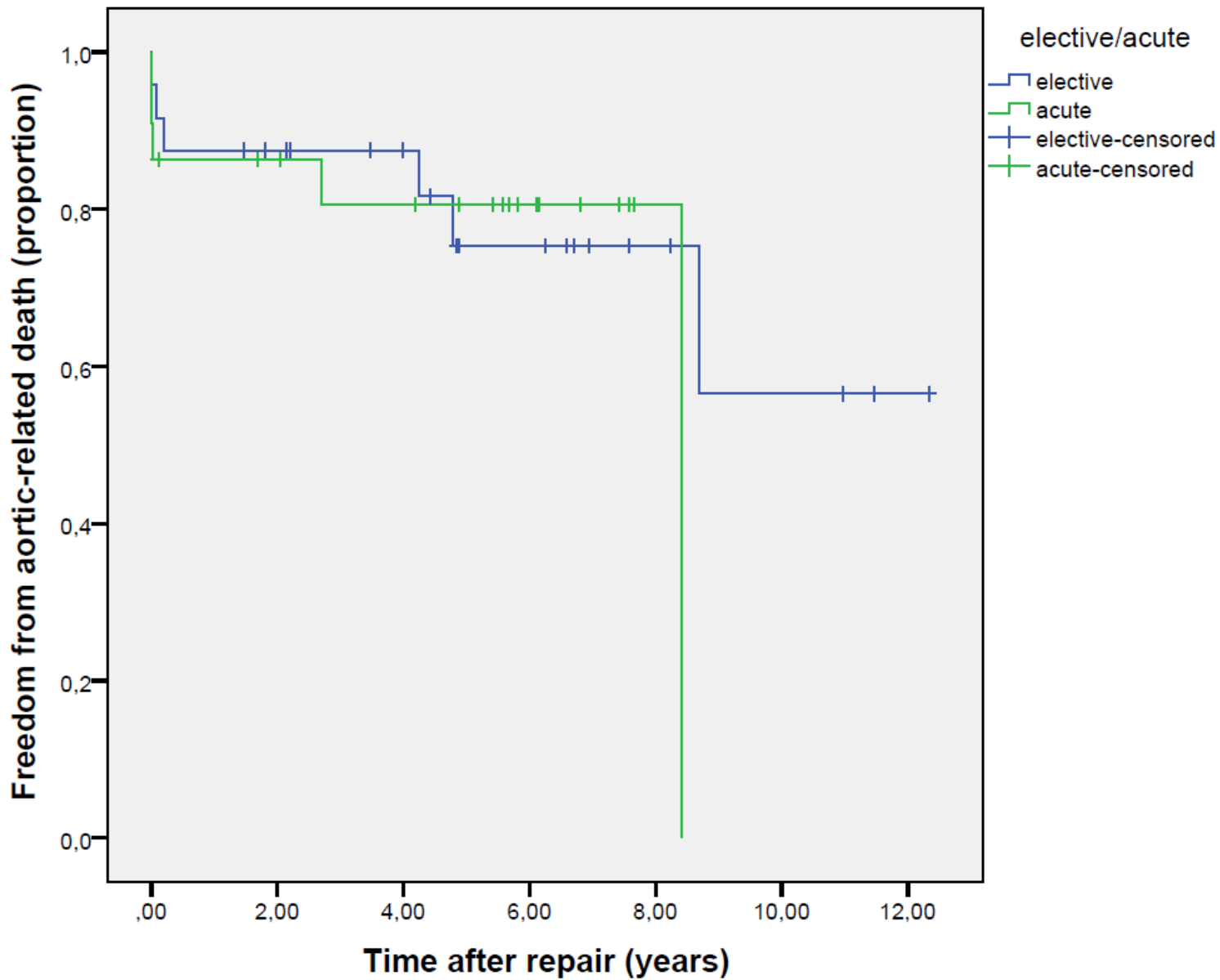
Survival Function



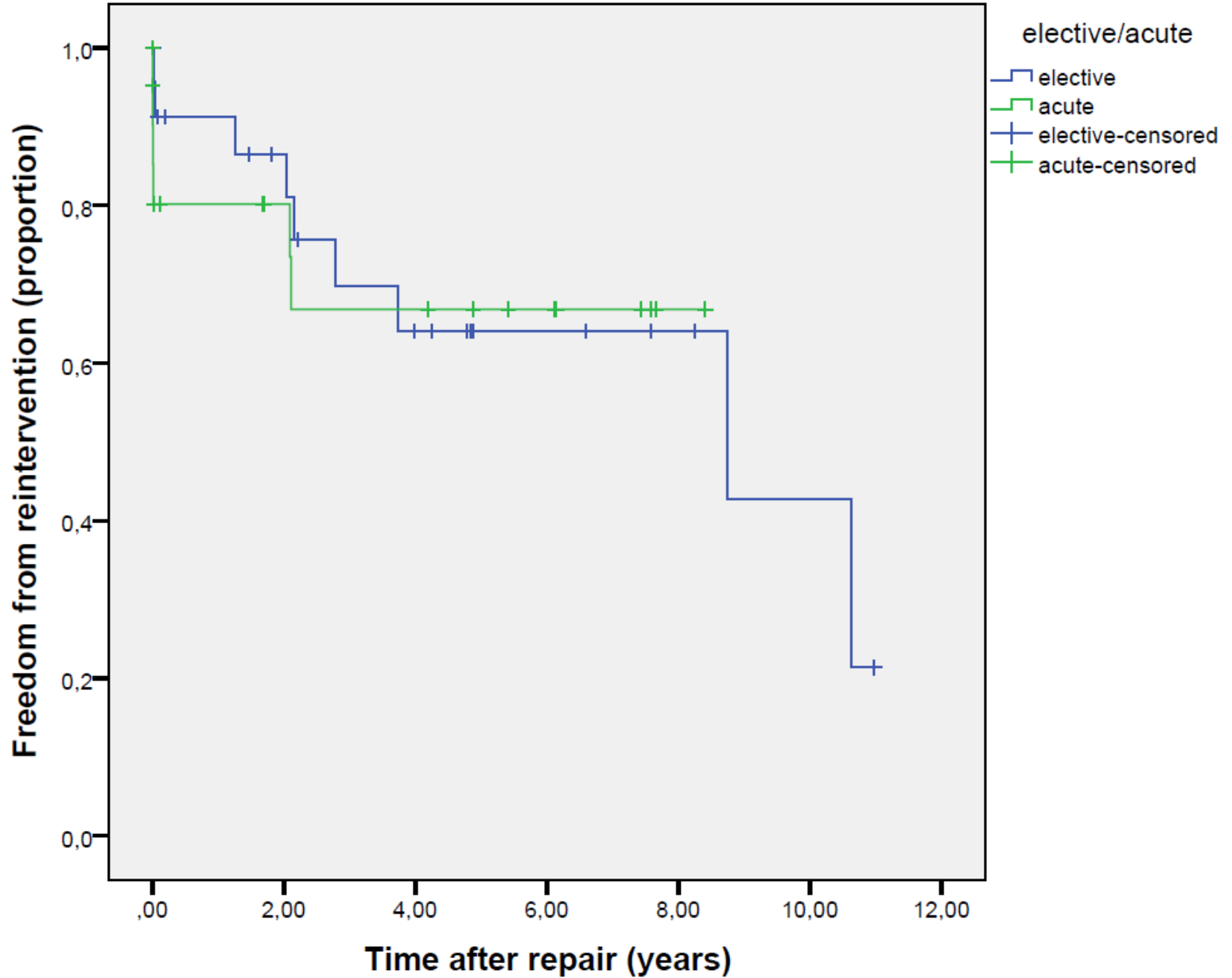
Survival Functions

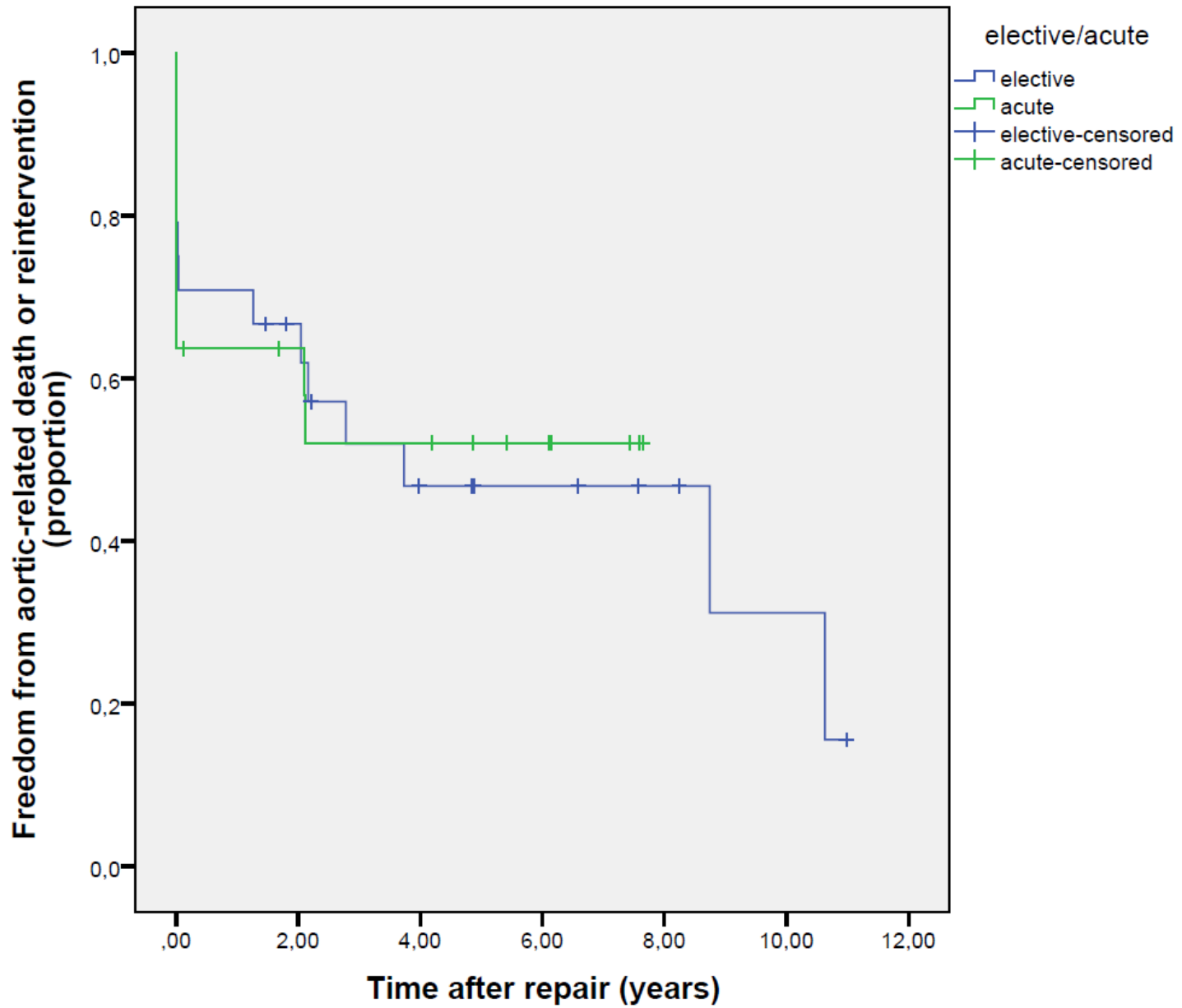


Survival Functions



Survival Functions






Meta-analysis

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ENDOVASCULAR
an official journal of the
INTERNATIONAL SOCIETY OF
ENDOVASCULAR SPECIALISTS
THERAPY. A SAGE Publication

Endovascular Treatment of Degenerative Aneurysms Involving Only the Descending Thoracic Aorta: Systematic Review and Meta-analysis

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2016, Vol. 23(2) 387–392
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DOI: 10.1177/1526602815626560
www.jevt.org


**Fausto Biancari, MD, PhD¹, Giovanni Mariscalco, MD, PhD², Silvia Mariani, MD²,
Petri Saari, MD, PhD³, Jari Satta, MD, PhD¹, and Tatu Juvonen, MD, PhD^{4,5}**

Table 1. Characteristics of Studies Evaluating Outcomes After Endovascular Treatment for Degenerative Aneurysm of the Descending Thoracic Aorta.

Author, Year, Country	Study Period	Study Design	Study Quality ^a	N	Elective Cases ^b	Stent-Grafts	Ishimaru Landing Zone, 2/3-4 ^b	Debranching Procedures ^b
Neuhauser, 2004, Austria	1997–2003	R	Fair	31	58	Mixed	26/74	3
Makaroun, 2005, USA	1999–2001	P	Good	139	100	Gore TAG	20/80	20
Glade, 2005, Netherlands	1999–2003	R	Good	42	83	Mixed	0/100	0
Marcheix, 2006, France	1996–2005	P	Good	45	82	Mixed	13/87	0
Appoo, 2006, USA	1999–2005	P	Good	99	—	Mixed	20/80	20
Cambria, 2009, USA	2005–2007	P	Good	20	0	Gore TAG	0/100	0
Hughes, 2010, USA	2005–2009	R	Fair	79	30	Mixed	42/58	5
Desai, 2012, USA	1995–2007	P	Good	106	92	Mixed	20/81	17
Yunoki, 2014, Japan	2008–2011	R	Good	36	100	Gore TAG	0/100	0
Saratzis, 2007, Greece	2003–2005	R	Fair	23	100	EndoFit	0/23	0
Saari, 2013, Finland	1998–2010	R	Good	53	77	Mixed	9/44	8

Abbreviations: P, prospective; R, retrospective.

^aQuality of these studies was assessed by the National Heart, Blood, and Lung Institute criteria for quality assessment of case series.

^bData are given as the percentages.

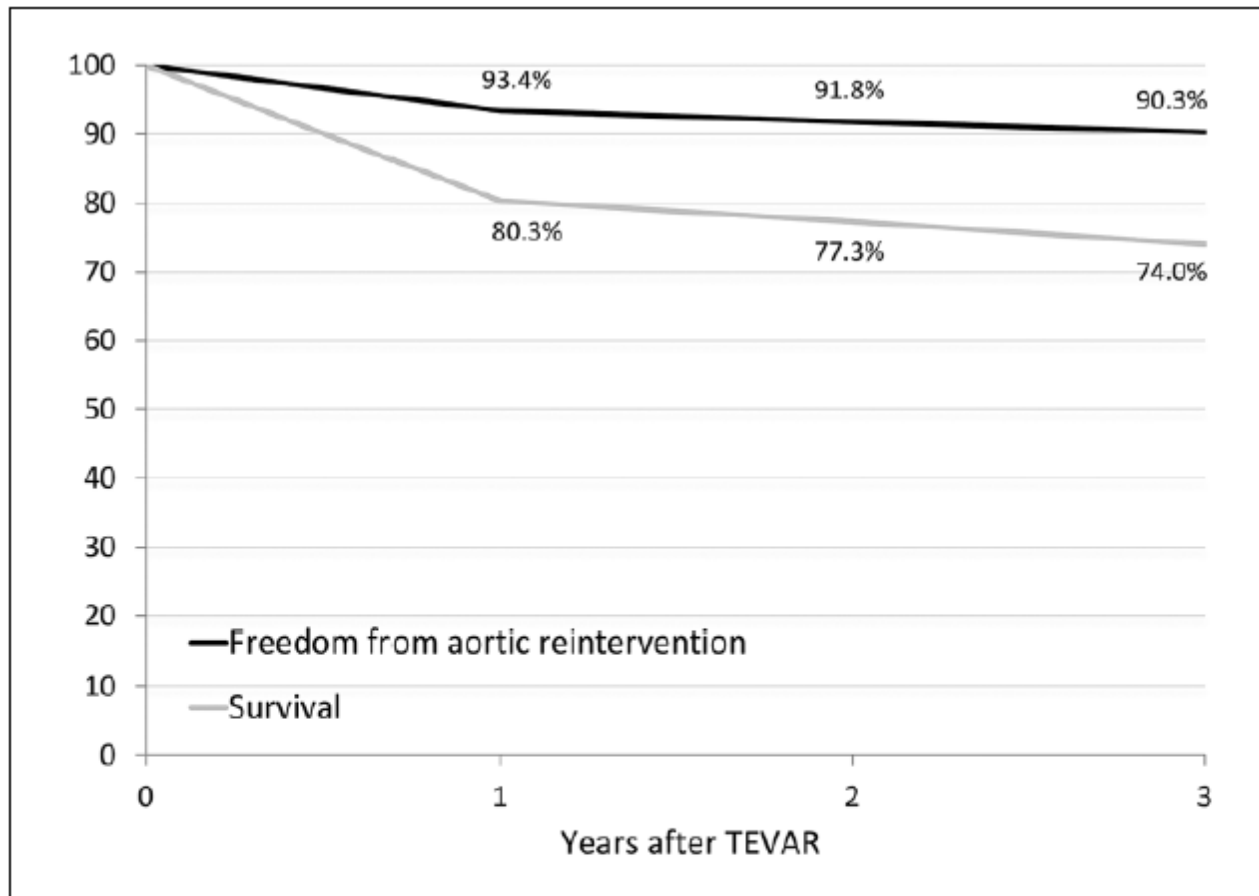


Figure 2. Pooled survival and freedom from aortic reintervention after endovascular treatment for degenerative aneurysm involving only the descending aorta.

Chimney occlusions

- 2 carotid (30 day, 1 year)
- 2 subclavian (3 year, 3 year)
- 4/48 chimneys = 8%

Reinterventions

Indication	≤ 3 yrs	>3 yrs
Chimney intervention	9	0
Distal extension	4	2
Proximal extension	0	1
Endoleak	2	1
Planned procedure	2	0
Other	1	1

Conclusions

- Aortic-related mortality is acceptable and well in line with standard TEVAR
- Chimney patency is acceptable
- Reintervention rate is significant
- Long-term data support use of chimney in emergency cases and elective cases



EndoVascular and Hybrid trauma management (EVTM) Symposium

Örebro, Sweden

3-5 February 2017

Main Topics:

EVTM concept, multidisciplinary approach

ABO / REBOA issues (Basic and advanced)

"What do we know" updates

Vascular trauma access Issues

Solutions by organs / body areas- cases- the options!

Pre Hospital and Military Aspects

Technical Aspects for Endo and hybrid solutions

Training Aspect

Complications, problems with EVTM

Animal research issues/updates

Organized by the Dept. Of
Cardiothoracic and Vascular Surgery
& dept. Of Surgery, Örebro
University Hospital, Sweden



Symposium chairs:

Tal Hörer (SW)

Joseph Dubose (USA)

Junichi Matsumoto (JP)

Jonny Morrison (UK)

Viktor Reva (RU)

Boris kessel (IS)

Lauri Handolin (FN)

George OOSThuzien (SA)

TBA

Faculty:

Larzon, Skoog, Pirouzram, Toivola,, Nilsson,
Idoguchi, Kon, Tomita, Matsumura, Falkenberg,
Lindgren, Vassiliu, Falkenberg, TBA

Partners: TBA

Cook medical, WI Gore, Philips,
Siemens, Ziehm, Tokai, Mentice

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