

## Value Of Properly Performed Ch/EVAR For Juxtarenal AAAs: Results From A Single Center With The Longest Available Follow-Up Confirm Long-Term Safety And Effectiveness: Technique Is Vital



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### Disclosure

- Consulting: Terumo Aortic, Cook Medical, Gore Medical, Microport
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s):




## Chimneys







## Endovascular Chimneys

**Many different chimney techniques**

- Different indication (minimum neck length?)
- Different amount of oversizing
- Different stents
  - Self-Expandable vs Balloon Expandable
  - Covered vs Non covered stent
- Different sequence of deployment
  - Main graft first vs Chimney grafts first
- Standard ballooning vs only ballooning for endoleak





## Endovascular Chimneys

**Standardized technique**


**Many different chimney techniques**

- Different indication (minimum sealing length?) **15mm**
- Different amount of oversizing **25-30%**
- Different stents
  - Self-Expandable vs **Viabahn 2/ chimney** Balloon Expandable
  - Covered vs Non covered stent
- Different sequence of deployment
  - Main graft first vs **Chimney grafts first**
- Standard ballooning vs **only ballooning for endoleak**



\*(de Beaufort et al. J Vasc Surg 2018;67:104-12.)

## Chimney graft technique





**Long-term outcomes of chimney endovascular aneurysm repair procedure for complex abdominal aortic pathologies**

Paolo Verlatto, MD,<sup>1,2</sup> Leonardo Foresti, MD,<sup>1,2</sup> Trjntje Bloemert-Tuin, MSc,<sup>1</sup> Santi Trimarchi, MD, PhD,<sup>1,2</sup> Constantijn E. V. B. Hazenberg, MD, PhD,<sup>1</sup> and Joost A. van Herwaarden, MD, PhD,<sup>1</sup> Utrecht, The Netherlands, and Milan, Italy  
(J Vasc Surg 2024;80(6):20.)

**Patient Characteristics**

2009 -2019 (including our learning curve)

- N = 51
- Mean age 77.1 ± 7.5
- Male 84 %
- All patients were UNFIT for OR and all rejected for FEVAR or Sympt AAA cases (n=8) or access problem during FEVAR (n=1)






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**Aneurysm Characteristics**

- Juxta/suprarenal 55 %
- Type IA after EVAR 35 %
- PSA after OSR 10%
- AAA Diameter 74.2 ± 20.1 mm
- Neck length 5.8 ± 6.1 mm






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**Procedural data**

- 83 / 83 planned chimneys deployed 100 %
  - 1 chimney n = 21 (41%)
  - 2 chimneys n = 28 (55%)
  - 3 chimneys n = 2 ( 4%)
- Mean oversizing 26 ± 7%
- Sealing zone length 23 ± 9 mm






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**Procedural data: Type Ia endoleaks**

- Type Ia endoleaks on completion angiography n=7 (14%)
  - 4 Resolved on first CTA
  - 3 persisted >30 days (13%, 45% oversizing, UNK)
    - 1 resolved during FU
    - 2 / 7 Type Ia endoleaks were persistent



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**Perioperative results**

30-day mortality n=2 (3.9 %)



- 1 bilateral chimney occlusion
- 1 Nosocomial pneumonia

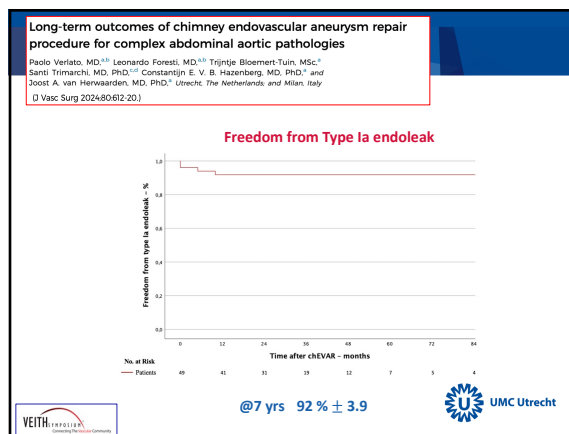
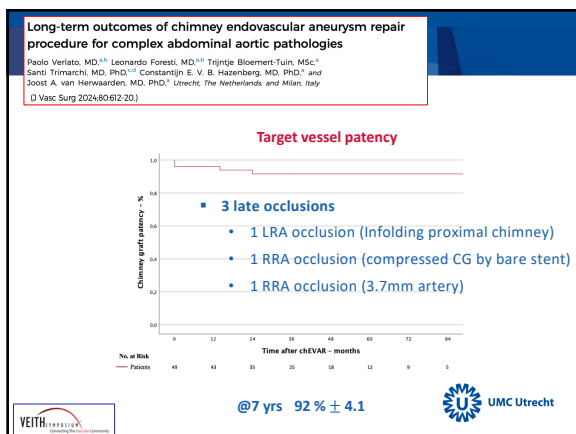
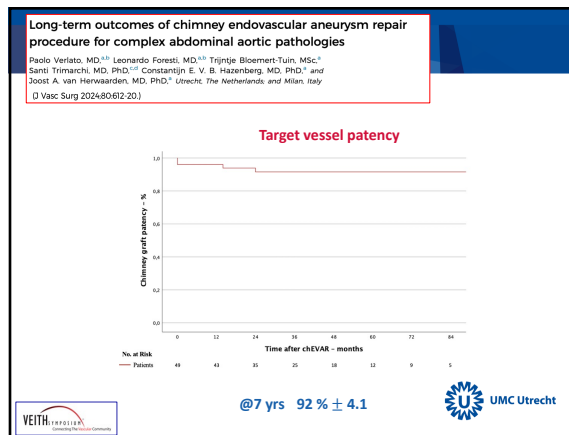
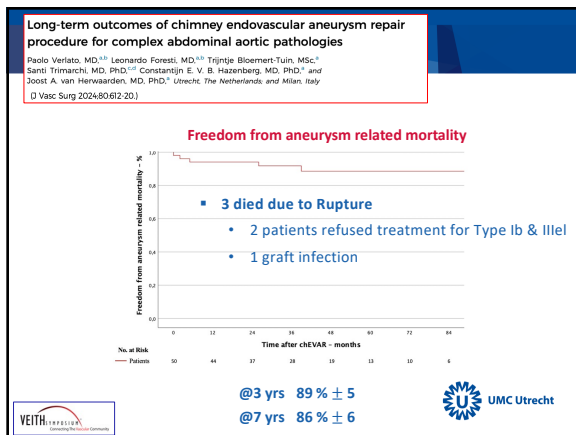
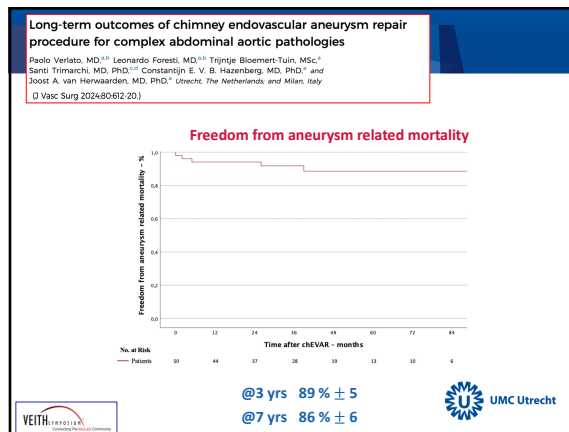
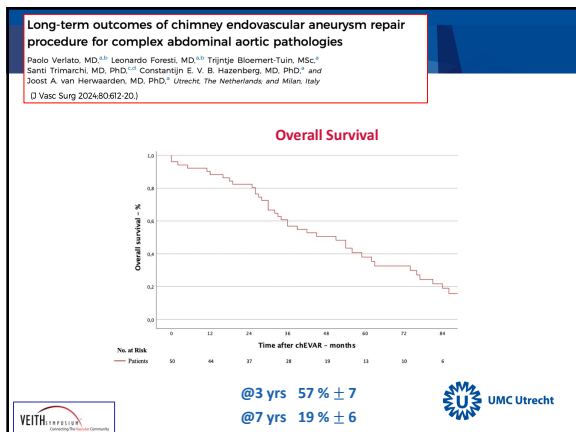



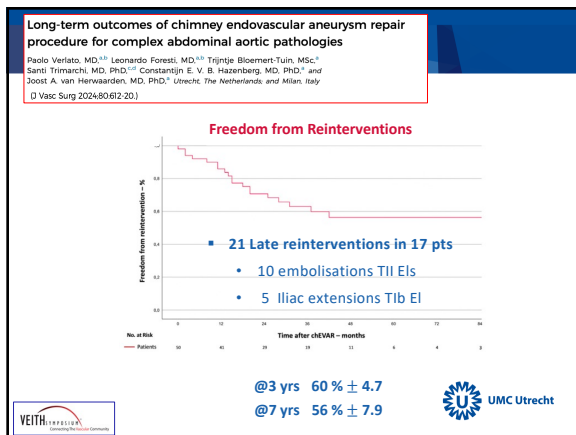
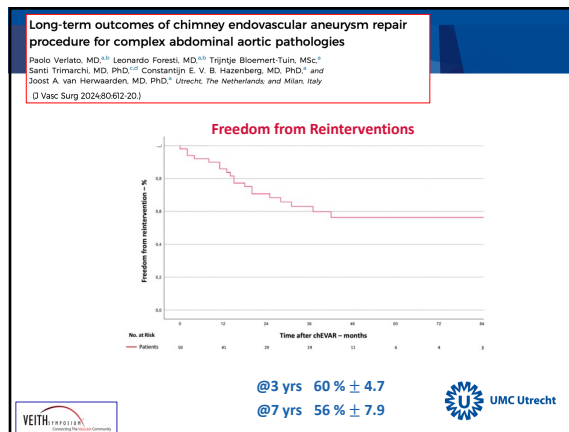
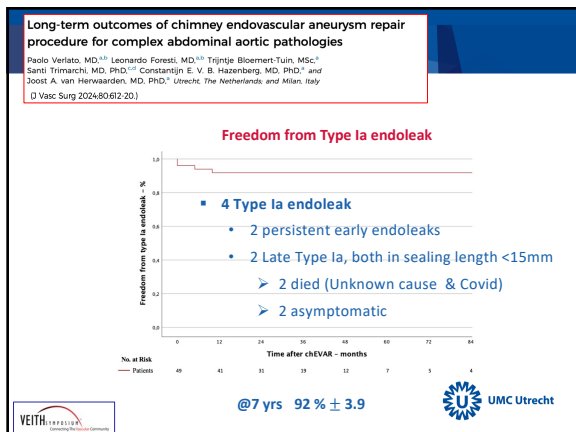
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**Mean follow-up: 47.7 (0-136) months**





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**Conclusion**

These single-center Longterm results of CHEVAR procedures with low aneurysm related death and high target vessel stability confirm the long-term safety and effectiveness of this standardized technique in a series of high-risk patients with complex & big diameter aneurysms, unfit for open repair and FEVAR.

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**Conclusion**

These results support the use of this chimney technique as bailout treatment

But prospectively collected data from larger series is necessary before expansion of the indication

**Acknowledgements**

Single center analysis

Dr Leonardo Foresti

Dr Paolo Verlatto



Thank you for your attention

VEITH VEITH GROUP

UMC Utrecht

The slide features a blue header with geometric shapes. Below it, there are two images: a modern hospital building on the left and an operating room on the right. In the center, the text "Thank you for your attention" is displayed. Below this text is a night photograph of a city street with a prominent church spire. At the bottom left is the VEITH logo, and at the bottom right is the UMC Utrecht logo.