

Fenestrated and branched stent-grafts for treatment of complex aortoiliac aneurysms

Citation for published version (APA):

Yazar, O. (2023). *Fenestrated and branched stent-grafts for treatment of complex aortoiliac aneurysms*. [Doctoral Thesis, Maastricht University]. Maastricht University. <https://doi.org/10.26481/dis.20231222oy>

Document status and date:

Published: 01/01/2023

DOI:

[10.26481/dis.20231222oy](https://doi.org/10.26481/dis.20231222oy)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

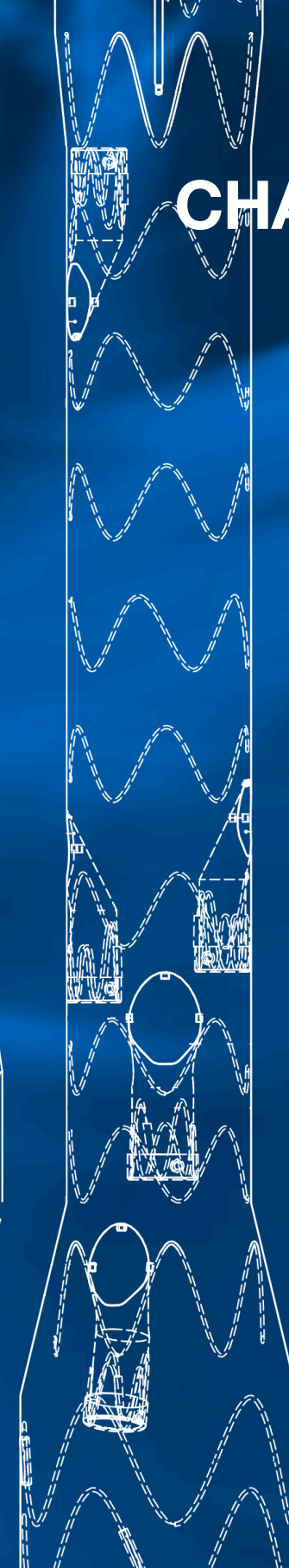
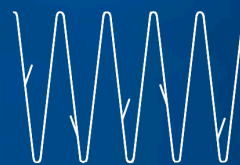
If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

CHAPTER 11

Impact paragraph



IMPACT PARAGRAPH

The main objective of this thesis is to show the impact and results of endovascular treatment in complex aortoiliac aneurysms. These complex stent-grafts have a workload on the overall organisation of the hospital. Twenty-four hours of dedicated vascular teams is necessary and close collaboration with several departments such as cardiology, anaesthesiology, and intensive care unit. The hospital's infrastructure must also be permitted with building a hybrid room and the financial availability of providing this structure. The research shows that hybrid operating room may assist in achieving favorable results especially in complex F/BEVAR. Currently nearly every vascular unit, which is treating complex aneurysm, has a hybrid room. Especially last generation hybrid operating room with highly sophisticated applications show their real benefits in operation time, radiation dose, contrast use, and even in long term clinical outcomes.

The thesis gives an insight in decision making between renal FEVAR or more complex F/BEVAR. The results advise a more liberal approach in choosing complex F/BEVAR stent-grafts if needed. However, liberal use of complex F/BEVAR in centers with less experience should remain cautious. Renal FEVAR in juxta-renal aneurysms remains a safe and effective treatment option in the borders of instruction of use with no higher risk on type Ia endoleak during follow-up compared to complex F/BEVAR.

One of the socioeconomics impacts of this thesis is revealing satisfactory results in the treatment of complex aneurysms within the elderly population. It shows that age alone is not an acceptable reason to deny a F/BEVAR intervention. Whether we should operate on these octogenarians or not, depends on the comorbidity, quality of life and patient's preference. In light of the more ageing population, it is recommended for further investigation about this topic. Hospitals and health care takers should prepare themselves for these challenging and ethical choices in the treatment of octogenarians. Endovascular treatment comes with a financial higher cost especially in complex aneurysms. The custom-made stent-grafts are even more expensive. However, endovascular treatments have shown their benefits in increasing mortality and morbidity. We have shown similar results with high technical intraoperative success and successfully exclusion of aneurysms for preventing rupture during follow-up. Even in endovascular reinterventions like FEVAR after EVAR we have presented high technical success of treatment of the aneurysm. Expanding the field of endovascular treatment, IBD studies have shown a safe and effective solution in the treatment of solitary iliac aneurysms or complex aortoiliac aneurysms. Moreover, it showed that stent-grafts from

different manufacturers could be combined. It can support physicians in specific situations, for example patients who already have a Medtronic® EVAR and have an indication to be treated with an IBD. Considering Medtronic doesn't have an IBD system yet, an Artivion® E-liac branch device could be used. The study also shows that not every manufacturer has to provide all stent-graft configurations, because it's justified to combine stent-grafts from different brands. The iBEVAR study shows the continuous development of technology creating stent-grafts, which can be implemented in different anatomies to expand the indications of endovascular treatment options. Combination of different configurations in the same stent-graft (inner-branch, outer-branch and fenestrations) will support expanding endovascular options.

The target group of this thesis is mainly for vascular surgeons and interventional radiologists and all healthcare workers who are involved in the treatment of complex aortoiliac aneurysms. These target groups can be informed via published studies from this thesis in international journals and via presentations on (inter) national congresses.

Further research is needed in different configurations (inner-branch, outer-branch and fenestrations) of these stent-grafts. Furthermore, in the iliac branch devices the options of branches or fenestrations are still a domain that needs extended examination. Establishing randomised controlled trials comparing fenestrated stent-grafts with branched stent-grafts in the treatment of aortoiliac aneurysm will provide value data. This data will influence the direction for further development of these stent-grafts and their applicability.