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## The pivotal role of endovascular repair in treating octogenarians suffering from abdominal aortic aneurysm

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## Letter to the Editor

## The pivotal role of endovascular repair in treating octogenarians suffering from abdominal aortic aneurysm




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**Keywords:**

Endovascular aneurysm repair  
Octogenarians  
Frailty

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Dear sir,

With great interest we have read the article by de Leur on the outcome of elective treatment of abdominal aortic aneurysm in elderly patients [1]. Over the past years, both the rate of AAA repair in octogenarians and the amount of endovascular procedures have increased [2]. When treating elective patients, there is an active interplay between the benefits of treatment and the risk of complications, including mortality. Consequently, there has been a shift toward a more conservative management in the frail and elderly patients. This paper fits perfectly in the new and still evolving insights in treating elderly vascular patients. However, although we agree with some of the authors' findings and conclusions, in our view a number of important issues remain insufficiently explained and underexposed.

The authors report on general mortality rates and conclude that after long-term follow-up (5-year is certainly not long-term FU) the mortality rate after EVAR is higher in octogenarians. Obviously elderly patient will die sooner compared to younger patients. They should have analyzed aneurysm related death and compared their outcome to either a younger cohort or the literature. A large multicenter study including 1200 electively treated AAA patients demonstrated the exact opposite with an excellent outcome after EVAR, with comparable technical success, short-term morbidity and mortality between octogenarians and younger patients [3]. With regard to follow-up after EVAR we found that the number of long-term stent and aneurysm-related complications are comparable between octogenarians and younger patients (respectively 40.4% and 39.6%;  $P = 0.82$ ). Interestingly, octogenarians underwent significantly less secondary interventions (8.2% vs 19.8%;  $P = 0.02$ ), without this affecting the rate of aneurysm related death (0%) [4].

Also, the authors report a higher mortality rate after conservative treatment compared to EVAR which is not in accordance with current ideas. A large systematic review focusing on patients unfit for elective AAA repair found much lower rupture rates in the untreated group in which the risk of death from causes other than AAA was higher than the risk of death from rupture [5]. In addition, de Leur et al. found a higher mortality after EVAR compared to open repair. A clear explanation for this exceptional outcome is not mentioned and also does not correspond to the current literature [6].

In general we feel that EVAR should be considered the gold standard for aneurysm repair in octogenarians assuming patients desire treatment. Even in frail and vulnerable patients EVAR has important benefits regarding complication rate, 30-day mortality and secondary outcome [7].

At last, we are concerned about the inclusion criteria for the conservative group in which women with aneurysms <50 mm and men with aneurysms <55 mm were included. Unless there are compelling factors such as rapid growth we feel that aneurysms that have not reached the international threshold for intervention should not be included in the analysis and probably led to an underestimation of the actual aneurysm related death.

In conclusion, the authors should be praised for investigating such an important topic in the current era, and we agree with their conclusion that adequate patient selection is pivotal regarding AAA treatment, especially in the elderly. However, EVAR has proven to be a save treatment in octogenarians with excellent technical success rates and comparable surgical and stent-related complications. In case of physical or anatomical unsuitability, a conservative approach could be envisaged, which evidently has lower rupture rates than previously thought.

### Conflicts of interest

None.

### References

- [1] K. de Leur, H.C. Flu, G.H. Ho, H.G.W. de Groot, E.J. Veen, L. van der Laan, Outcome of elective treatment of abdominal aortic aneurysm in elderly patients, *Int. J. Surg.* 15 (2015) 117–123.
- [2] K. Mani, T. Lees, B. Beiles, L.P. Jensen, M. Venermo, G. Simo, D. Palombo, E. Halbakken, T. Troeng, P. Wigger, M. Björck, Treatment of abdominal aortic aneurysm in nine countries 2005–2009: a vasUNET report, *Eur. J. Vasc. Endovasc. Surg.* 42 (2011) 598–607.
- [3] R.A. Pol, C.J. Zeebregts, S.M.M. van Sterkenburg, M.M.P.J. Reijnen, Endovascular abdominal aortic aneurysm repair in octogenarians: early outcome and quality of life from the endurant stent graft natural selection global post-market registry, *J. Vasc. Surg.* 56 (2012) 27–35.
- [4] L. Visser, R.A. Pol, I.F.J. Tielliu, J.J.A.M. van den Dunge, C.J. Zeebregts, A limited and customized follow-up seems justified after endovascular abdominal aneurysm repair in octogenarians, *J. Vasc. Surg.* 59 (2014) 1232–1240.
- [5] F. Parkinson, S. Ferguson, P. Lewis, I.M. Williams, C.P. Twince, Rupture rates of untreated large abdominal aortic aneurysms in patients unfit for elective repair, *J. Vasc. Surg.* 61 (2015) 1606–1612.
- [6] M. Henebiens, A. Vahl, M.J. Koelemay, Elective surgery of abdominal aortic aneurysms in octogenarians: a systematic review, *J. Vasc. Surg.* 47 (2008) 676–681.
- [7] S. Arya, S.I. Kim, Y. Duwayri, L.P. Brewster, R. Veeraswamy, A. Salam, T.F. Dodson, Frailty increases the risk of 30-day mortality, morbidity, and failure to rescue after elective abdominal aortic aneurysm repair independent of age and comorbidities, *J. Vasc. Surg.* 61 (2015) 324–331.

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